

DECEMBER 1993, VOLUME 1, NUMBER 9



PROFESSIONAL

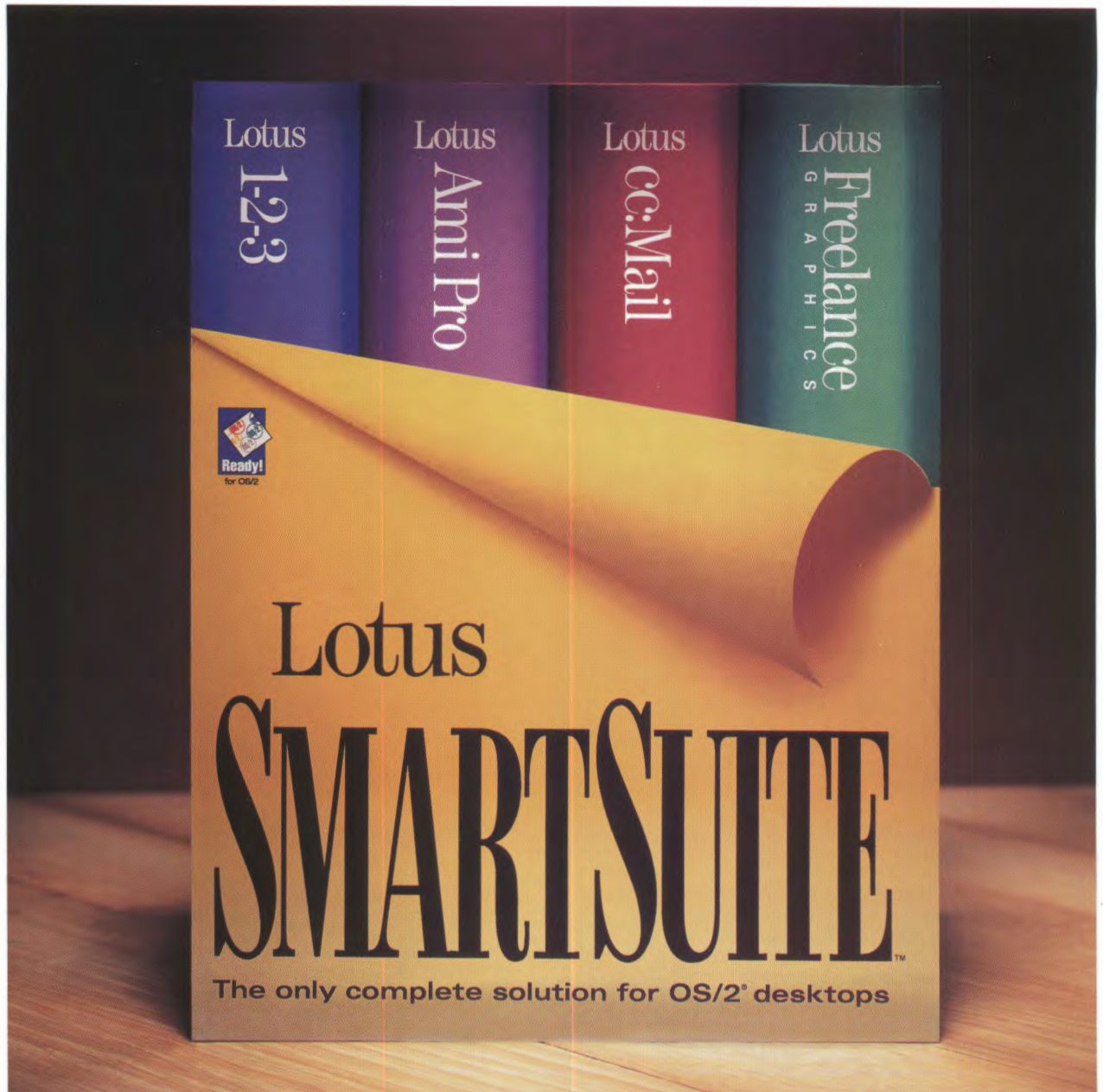
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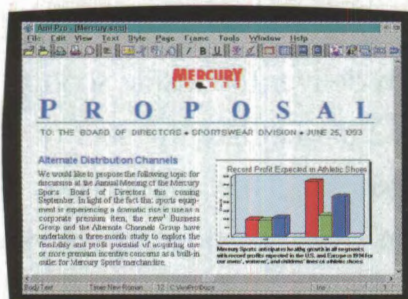
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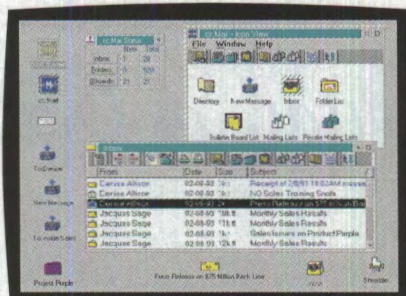


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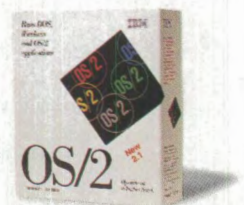
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Circle #150

December 1993 OS2 Professional 1

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E · E · K

OCTOBER 11, 1993 VOLUME 1 NUMBER 2 PAGE 1
O · S · 2 · W · E · E · K
OS/2 NEWS AND DEVELOPMENTS FROM THE EDITORS OF OS/2 PROFESSIONAL

IBM plans Ferengi raid

IBM will ratchet up its marketing assault on the Windows crowd in a big way with a secret new OS/2 product code-named Ferengi for the insidious commercial raiders seen on Star Trek. The package will not be a mere front-end GUI, but a fully functioning OS/2 that will be virtually indistinguishable from the 2.1 packages installed by OS/2 users, reliable sources told OS/2 Week.

The as yet untitled product is designed to install easily on top of DOS and Windows as an upgrade to Windows 3.1. It will allow current Windows users to readily adopt the OS/2 operating system without giving up their existing configurations. Ironically, Ferengi will still require between 15 and 17 diskettes. At press time, the number is not final.

IBM has not finalized a price for the product, but \$49.95 is being actively considered. Ferengi is still in beta, but Big Blue is rushing the product to be ready for a Comdex announcement.

CA readies OS/2 apps

Computer Associates, the Ithaca, New York software powerhouse, plans to ship by Nov. 5th the next two sources at the company. CA-Super Project, an applications development tool, and CA-Super Project, an applications management tool, are now in production. The first three OS/2 applications CA shipped were CA-Compete, CA-Textor and CA-Simply Accounting. Further announcements are expected.

DCF/2 suspends shipping, await HPFS fixes

Proportional Software has paused in its shipments of DCF/2 version 1.1 while awaiting fixes in the OS/2 HPFS. According to company co-owner Sandi Edwick, DCF/2's performance "is far too slow." DCF/2 creates a "container" file that takes a drive letter and compresses and decompresses on-the-fly.

Waiting for Lou

The most sought-after person in the business world may well be IBM's CEO, Louis Gerstner. Dozens of requests for speeches, interviews, and public appearances rain down on his office daily. From the thousands of requests he receives each month, Gerstner accepts only one or two, leaving the other hopeful requesters disappointed.

It's a staff who most deftly declines the many invitations. Not a few of the hopefuls—both inside and outside IBM—can't understand why Gerstner won't appear or meet, especially when the inviting groups represent major business segments. One Gerstner source close to his appointment book told OS/2 Week, "He's just too busy running the company."



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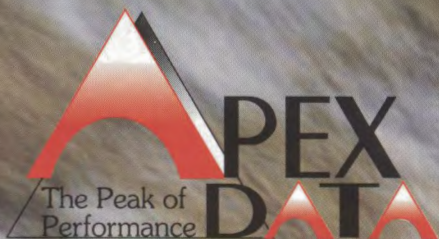
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SofNet is on the move—not just to its third location in as many years, but in the fax software marketplace as well.

BY MIKE FILLON

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Systems integrators make a living by advising clients on technology issues. And lately the topic of conversation has been OS/2.

BY TIBBETT L. SPEER

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Now a version of the top-selling network operating system is available for OS/2.

BY WAYNE RASH JR.

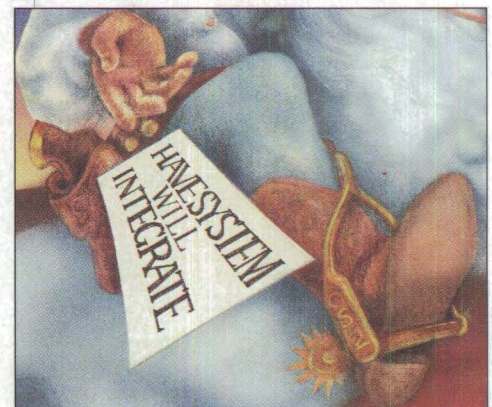
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The Ferengi frenzy continues, two new AM products, OS/2 on the shop floor, and more.

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The Chicago beta may well be the best thing that's ever happened to OS/2 since the release of NT.

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OS/2 Inside & Out by Kathy Ivens and Brian Proffitt, and *Van Wolverton's Guide to OS/2* by Van Wolverton and Jim Meade, reviewed by Alan Jay Weiner.

93 DATA DATES

Look for Object World in Boston in January, and start getting ready for the IBM PS Technical Interchange in April.

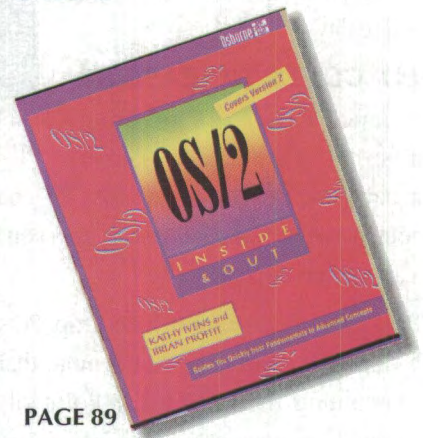
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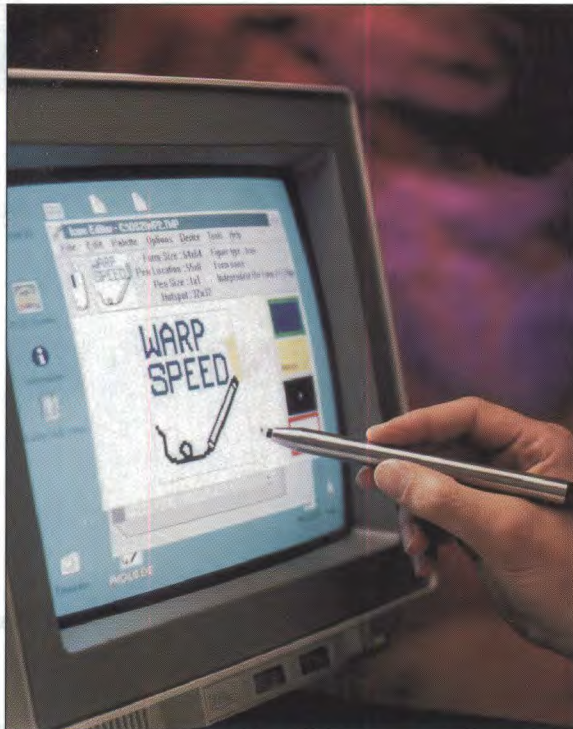
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Circle #166

OS/2—Solving the MIS Dilemma

Many corporate IS managers are rightly confused by the psychological and marketing OS warfare now underway. After waiting for what seems forever for a messianic NT to turn desktop Windows users into 32-bit preemptive multitaskers, there is widespread disappointment. NT is not a slim and fast operating system that will transform the average desktop. Sure, it's too resource-demanding and not sufficiently backward compatible. It's easy to upgrade your personal system to 16MB RAM and a spare 100MB of disk space. But try multiplying that cost by the fleet of computers your company operates.

Right about now, MIS America is thoroughly confused—not just about 32-bit operating systems, but also its next hardware platform move. There are millions of 286 and 386 users waiting for a faster and more capable system. Let's face it, plenty of employees are using what should be doorstops and boat anchors—8086s and worse to write memos and crunch numbers. (Even our office has a hand-me-down monochrome AT for the receptionist.) Delayed purchases will soon burst into a wave of hardware modernization. But does your company replace existing machines with cheap 486s, or invest in Pentium-style machines (which are just souped up 386s), or wait until late 1994 to buy into the RISC-based PowerPC?

OS/2 goes a long way toward solving all these quandaries. It is the next step on a path that began some years ago, and it will reliably lead your company into the end of this century: DOS to Windows to OS/2. Taligent technology enhances your operating system *en route* to its personality within the Workplace OS and ultimately to the true object-oriented computing environment. Traveling that path also allows your company to function across a hardware spectrum: from the simple desktop to the grandest enterprise systems, including the multi-personalities PowerPC RISC machines scheduled to appear late next year.

Stand back from the hype. Remember, what counts is not your company's operating system but rather the system that allows your company to operate. The goal is productivity, not the range war between Microsoft and IBM. All the evangelism and enthusiasm, and all the bigotry and bashing, won't save your butt if your mission-critical operations falter or if your competition uses a technology lever to pole vault past you.

That's why OS/2's promise is the answer to the MIS dilemma.

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Ironically, persuasive proof can be seen in what many consider to be an OS/2 failure first reported in *OS/2 Week*: WordPerfect's withdrawal of its word processor from OS/2 following their year-end fix of version 5.2. Think again, that's not a failure for OS/2, but a comment on WordPerfect's financial situation. WordPerfect is redirecting its development in 6.0 for Windows to offer OS/2 Workplace Shell features for its own reasons. That reform means very little disruption for users at OS/2 sites. Those working with the old DOS and Windows version have long been able to use WordPerfect in OS/2's DOS or Windows sessions with all the familiar commands—but faster and more productively under OS/2. Those who migrated to the 5.2 port—overlooking the bugginess and performance problems of the program itself—will continue to use 5.2 and will undoubtedly upgrade to a hybrid 6.0. No OS adjustment is necessary. Users can follow WordPerfect through these changes because OS/2 allows all the backward compatibility and forward interoperability necessary. Your company maintains its standardization.

Once your boat anchors are replaced with either PowerPCs or Intel-based SMP machines, OS/2 will both support the Intel-based box and function as a major personality within the Workplace OS. Moreover, OS/2's inherent connectivity options make OS/2 the meeting place for nearly all of your company's enterprise needs. *OS/2 Professional* will continue to document the hazard signs and shortcuts your company will encounter along that path. Next year will be the year for OS/2. The installed base, currently in excess of 3 million, may double. With Ferengi (OS/2 for Windows), the numbers may exceed that. You'll want to be there. And we'll be with you.

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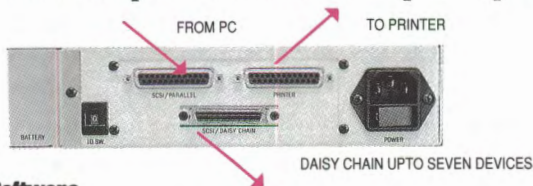
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Comments, criticisms and observations

Cache kudos

I think you have a great magazine. The Code Cache and REXX Programming features are especially appreciated. Long live OS/2 and your great magazine!

Carl Goode

Newtown, Connecticut

Search for a lost reader

I read the letter from Leila S. Gaines in San Mateo, California [Input, October]. If you have Leila contact me I will, at my own expense, go and install the OS/2 for her if she will agree to use it.

James Robertson

Mill Valley, California

[Editor's Note: Leila, if you're out there, it's pretty hard to find you! Get in touch with us if you're interested in Mr. Robertson's offer.]

Reader tips

I am writing regarding the Input letter from Marvin Feuerstein about FaxWorks [October]. While the default cover sheet for FaxWorks does contain the company's name in a large, bold font, I found it relatively easy to change the cover sheet to one I designed (using Paintbrush) that contains my company's logo instead. If Mr. Feuerstein does not like the FaxWorks cover, he should change it. He may not be happy with the fact the product ships that way, but since it can be changed it's not a major drawback.

I enjoy reading your magazine and find many of the articles interesting and helpful. Keep up the good work!

Virginia Milewski

Itasca, Illinois

I, too, was outraged when I discovered that SofNet expected me to advertise their product each time I send a fax. There is a solution, however, and it is called Fax/PM. This program is pretty well matched with FaxWorks in terms of performance and utility. Fax/PM is available from American TeleRep in South Windsor, Connecticut.

I write this letter not because I have any financial interest in Fax/PM but because I think that SofNet should be pilloried for their arrogance: We are customers, not billboards! We have paid for software, not the obligation to carry SofNet's advertising.

Lastly, *OS/2 Professional* is good: Keep going! Just one thing: While the articles comparing OS/2 and NT have been very useful, all those remarks about NT being virtually on its deathbed sound like a lot of whistling in the dark. Microsoft will doubtless eventually lick NT into shape while its formidable marketing machine buys time. OS/2 may be better, but IBM has its work cut out.

Nicholas Avery

Rockville, Maryland

Keep a low profile

Once again I see why journalists have so little credibility in our country. Your article "In the Fast Lane with OS/2" [September 1993] completely misrepresents the status of OS/2 at WPPSS. On page 42 you state, "WPPSS runs 1,400 PCs throughout the plant, most of them operating OS/2 2.0. Although 'there are a few die-hard Windows users that I may never get to convert,' ..." On page 42 you also state, "The plant now runs 350 licensed copies of 2.0..." The second statement is nearly correct. Instead of saying "runs 350," it should say "owns 350." In fact, there are numerous people, myself included, who own OS/2 2.0 but who have removed it from their computers. We probably "run" about 300 copies.

Now if the second statement is essentially correct, then the first statement is either incorrect or we are in serious violation of our license agreements. Based on your own article it is clear that the first statement is incorrect.

The decision to use OS/2 in the Supply System was made by our Information Organization without talking to users. Contrary to the message presented in the article, numerous orga-

nizations (e.g., Quality Assurance and Engineering) have elected to forego support on their software rather than use OS/2. In fact, since the decision was made by Information to "standardize" on OS/2, the company as a whole has bought about two copies of Windows for every copy of OS/2. We presently run about 50 percent Windows, 25 percent OS/2, and 25 percent straight DOS. There are far more than "a few die-hard Windows users" as the article states.

The reasons so many of us have rejected OS/2 are threefold: (1) there is a steep learning curve (contrary to what the article implies), (2) there are steep hardware requirements, and (3) there at least has been (and is expected again in the future) a Windows software compatibility problem.

Wallace Davis

*Washington Public Power Supply System
Richland, Washington*

[Anne Longworth replies: Many employees of WPPSS do continue to use Windows. However, according to Rich Bresnahan, director of communications at the Washington utility, "OS/2 is our official operating system of choice." In support of that statement, WPPSS has, since September, increased its licensed copies of OS/2 to more than 400—a figure which nonetheless remains well below half of 1,400. My apologies for the mis-statement.]

Critical reversal

Last February I wrote a very critical letter to you. I was amazed when you printed it. You not only printed my letter but declared a new policy of not abusing Windows and its adherents. I was impressed when subsequent issues showed that you really meant it. I must congratulate you on both your admission and on your follow through.

I may still disagree with you, but now it's on content and not on tone. I have to read everything since I can no longer dismiss it as random whining. Now

continued on page 91

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BYTES & PIECES

News and trivialities, important and obscure

OS/2 2.2 in 1994

While most of us are just recovering from this year's Comdex, IBM is already looking a year ahead to the 1994 event at which it plans to release OS/2 version 2.2, according to a report in *OS/2 Week*.

The new OS/2 version will go into beta release early in 1994. Since 2.2 will feature support for symmetrical multi-processing computers, some IBM planners are wondering whether two different packages may be needed, one for uniprocessor users and one for SMP users.

IBM is not waiting for 2.2 before unveiling SMP support under OS/2. A stand-alone product, OS/2 Symmetrical Multiprocessing, will go into beta this month. IBM hopes its SMP software will be pre-loaded into SMP machines being developed by Compaq, AST, and Everex.

Edwin Black

OS/2 touchdown



The second annual IBM OS/2 Fiesta Bowl will be held on January 1, 1994, at the Arizona State University Sun Devil Stadium. The top two ranking college football teams will surely be inspired to score by the four 30-second OS/2 advertisements as the game is nationally televised on NBC. This year IBM marketing is ready for the event and they hope to make a genuine market in-road. IBM will bring in top executives as well as OS/2 customers for the sellout game,

the OS/2 Fiesta Bowl Parade, and the Fiesta Bowl New Year's Eve Ball. At press time the two play-off teams had not yet been determined. We can't wait to see if this year the players will once again display those barely discernible OS/2 stickers on their helmets.

Anne Longworth

Still thinking

For such a hot product, the ThinkPad is having a hard time gaining momentum. First came production delays with the active color matrix screen. Now the most recent hurdle is a delay in production of the 500 model because of battery problems. ThinkPads do not come pre-loaded with OS/2 unless specifically ordered through IBM's 800 line.

Anne Longworth

Taligent lives!

Rumors that IBM's CEO Louis Gerstner has placed Taligent on a cost-cutting "hit list" are unfounded, key IBM executives tell *OS/2 Week*. IBM is reportedly spending some \$4 million per month on the project. But the executives say that Taligent is still vital to IBM's overall long term strategy and no effort is being made to cancel the program.

Indeed, just after an article in *USA Today* appeared claiming Gerstner was said to be very concerned about Taligent, Gerstner rebuffed the notion to an associate, remarking, "Of course I'm concerned about Taligent, but

not any more than I'm concerned about anything else." Sources close to Gerstner insist that Taligent was always pegged to begin showing a return on investment in the mid-90s and is still on target. Those sources insist that Taligent is still considered an indispensable route between OS/2 and IBM's long term object-oriented strategy. Moreover, Taligent is already licensing new technology to OS/2. Those who predict Taligent is dead may find themselves "Pink-faced."

Edwin Black

Talk to us

Since establishing *OS/2 Professional's* presence on-line through BIX, the lines have been jumping. This month os2.pro/tips hit the Hot Topics list as one of the top 20 most active conversations. To get on, dial (800) 695-4882, type BIX, then, at the name prompt, type BIX.s2pr.

Ossie Rollins


Jumpin' Jim

James Cannavino, currently senior vice president and group executive for PSP, has been named senior vice president of strategy and development replacing retiring Bernard Puckett. Insiders say the promotion is quite a coup. This is the third title change for Cannavino in the past month or so, but the first official transfer of responsibility. Cannavino has been with IBM since 1963 when he started as a customer engineer.

In his new position, which begins this month, Cannavino will report directly to Lou Gerstner. The race is on for Cannavino's successor at the old Personal Systems grouping. You guessed it: PSP president Lee Reiswig is among the oft mentioned.

Anne Longworth

Novel bug



OS/2 Professional has discovered a rare but frustrating bug within OS/2 2.1 that has been causing a series of problems to users and has

cropped up stubbornly in installations of Novell NetWare for OS/2.

The bug manifests itself when executable programs with duplicate names (except for the extension) are present on the disk. OS/2 apparently executes the first one it finds, rather than the OS/2 specific executable.

For NetWare installers, this means when you attempt to run the install program, OS/2 runs the DOS INSTALL.COM rather than INSTALL.CMD. Since the DOS version of the NetWare INSTALL file will not function under OS/2, the installation process crashes.

The best work-around is to use unique names for each OS, or to type the full file name of the executable (for example INSTALL.CMD).

OS/2 Professional has notified Novell of the problem.

Wayne Rash

BYTES & PIECES



Pro driver

The guy who zoomed by assistant publisher Margaret Dutcher on the Beltway made quite an impression. His license plate read "OS/2 PRO." Hey, if you're out there, call us. And how'd you like to sell those plates?

Ossie Rollins

Getting online

If you've crashed and burned trying to run the first release of America Online with Windows under OS/2 2.1, you might want to try again with

WAOL version 1.1.

Here's how to do it: Install WAOL 1.1 in WIN-OS/2 Full Screen. (Or reinstall it there if you already have it installed in a DOS partition.) Once you've done that successfully, you can also run WAOL seamlessly from the OS/2 desktop by creating an WAOL program icon. Open the Templates folder and drag the Program icon onto the desktop. The system will open the Settings notebook to the Program page. Enter the drive, path, and WAOL.EXE in the first box, then the drive and path in the Working Directory box. Go to the next page (Session), click WIN-OS/2 Settings, and click WIN 3.1 Enhanced Compatibility.

Close the Settings notebook. Now you should be able to start over WAOL from the program object you just created.

There's an OS/2 forum on WAOL. The forum leader is PA Aud. She says that if you prefer, you can also migrate WAOL to the desktop after installing it in WIN-OS/2.

If you have problems, call America Online at (800) 827-6364. You can also call that number to get a free copy of the software.

Marlene Semple

WordPerfect redefines OS/2 strategy

Weeks after its announcement that development for WordPerfect for OS/2 would stop

with version 5.2, WordPerfect Corporation is taking lumps on the OS/2 sections of CompuServe and the OS/2 Professional conference on BIX. Company insiders say, however, that the adverse reaction from the OS/2 was not greater than they expected.

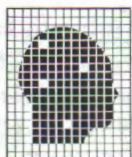
WordPerfect remains committed to several other OS/2 projects. The decision to redefine platform development strategy affects "all client applications," says Rich Running, who headed up the company's OS/2 team. "However, WordPerfect will continue to support OS/2 server applications such as WordPerfect Office, Message Server and gateways." ♦

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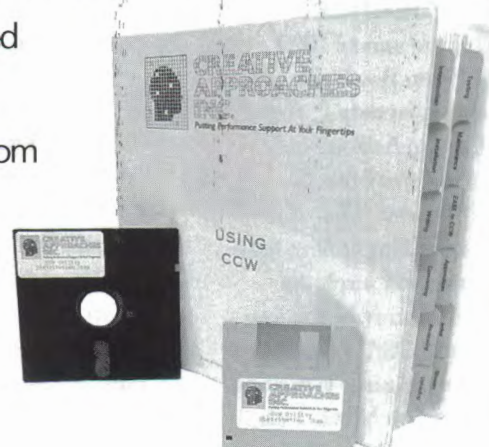
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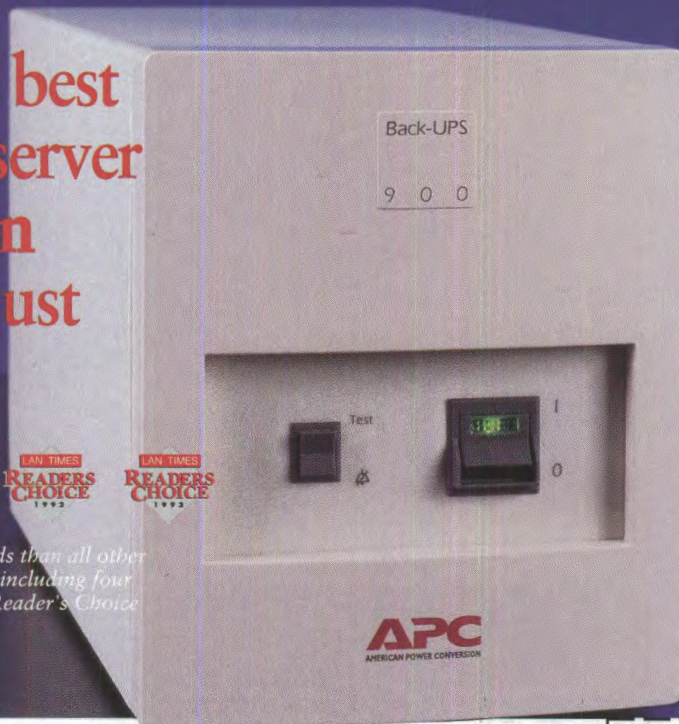
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BK900	Multiple systems, longer runtime applications	\$599
BK1250	Multiple systems, LAN hubs, small minis, telecom equipment	\$799

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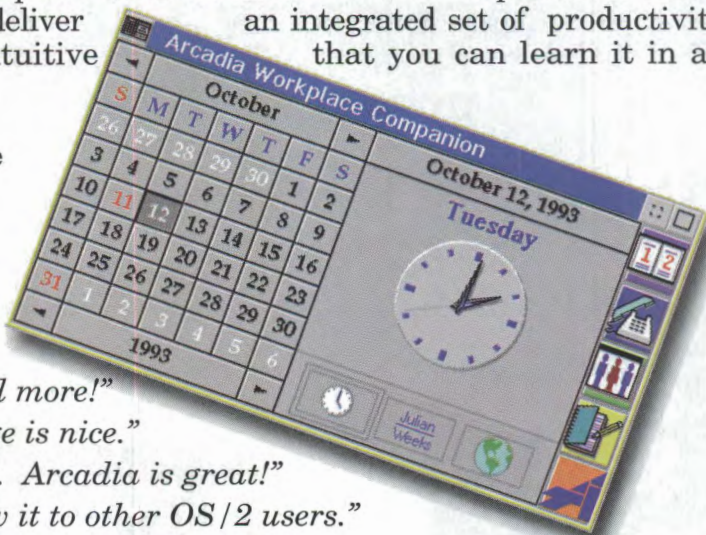
“A PIM with a twist: This one’s for OS/2”

- PC Magazine, September 28, 1993

The **Arcadia Workplace Companion** is a personal information manager (PIM) designed specifically for the OS/2 2.1's 32-bit Workplace Shell environment. It exploits all of the powerful capabilities provided by OS/2 to deliver an integrated set of productivity tools. Its object-oriented design is so intuitive that you can learn it in an extremely short period of time.

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- “Well designed and thought out. I’ll show it to other OS/2 users.”



CLOCK/CALENDAR

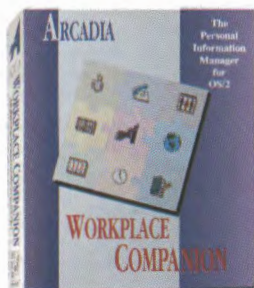
This module is the focal point of **Arcadia Workplace Companion**. The Clock/Calendar shows the current date and time and provides the launching pad for all of the other modules.

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The Contact List helps you keep track of important contacts, relatives and friends. A subset of the Phone Book, you can use the Contact List to gather all of the people that you contact frequently. Its compact size lets you keep it open without taking up a lot of space on your desktop.

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The Road to Chicago

BY WILLIAM F. ZACHMANN

There are lots of good reasons for pre-release alpha or beta test programs. Not every such test program, however, is done solely for the reasons officially stated.

Microsoft's "Microsoft Chicago Preliminary Release—August 1993" test program (or the "Windows 4.0 alpha," aka Chicago pre-beta beta) is one such example. It was released for not very good reasons; worse, it didn't even do a very good job accomplishing those goals.

To understand why is also to understand that the window of opportunity for OS/2 is open much wider, and will likely stay open much longer, than one might have thought only a few months ago. In fact, the Chicago pre-beta beta may very well be the best thing that has happened for OS/2 since the release of Microsoft Windows NT 3.1.

Good reasons for pre-release test programs include being able to get feedback on details of the product, to identify bugs so that they can be fixed, and, in the case of systems products, to give independent software vendors an advance look at a software platform they may wish to use for applications development.

All of the above are no doubt among the reasons for last August's Chicago pre-beta beta. But they weren't the only, and not even necessarily the primary, reasons. Another was to try to slow the growing momentum for OS/2.

Originally, that wasn't supposed to be necessary. Microsoft's original plan to dominate the computer world by controlling the operating system platforms on which the application systems of the '90s would be written assumed that IBM wouldn't be able to field a viable 32-bit OS/2 2.x product in the first place. And, in the odd chance it did, Windows NT was supposed to stop OS/2 dead in its tracks.

What Microsoft first described, back in the spring of 1991, as "WIN32 for DOS" (now "Chicago") wasn't meant to do battle against OS/2 2.x at all. Windows NT, which was planned to run several applications well on any 386SX or higher system with no

more than 8MB of memory, was supposed to administer a swift *coup de grace* to whatever was left of OS/2 2.x long before "WIN32 for DOS" saw the light of day.

The low-end implementation of WIN32 for DOS was instead intended to mop up the remaining low-end systems left over after Windows NT had captured the top third (or at least top quarter) of desktop systems and all but locked up the server market. WIN32 for DOS was simply to be the way Microsoft would leverage NT's smashing success onto the remaining two-thirds of less capable office and home systems.

Once it became clear, however, that NT's bloated memory requirements would not only keep it from being the desktop OS/2 killer it was meant to be, but prevent it from being a serious competitor on the general office desktop at all, WIN32 for DOS—now "Chicago"—began to take on a new and more urgent significance for Microsoft.

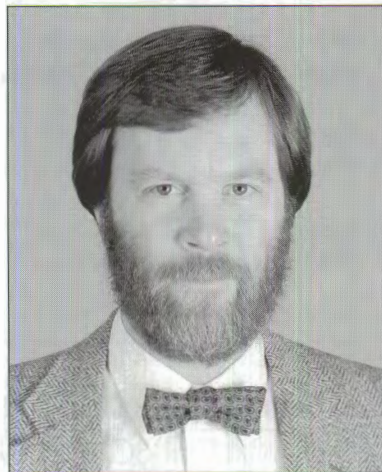
As long as OS/2 2.0 did not really deliver a better Windows than Windows 3.1, and NT was still coming real soon now as the OS/2 killer the industry had been led to expect, time was on the side of Microsoft and Windows Everywhere.

Once OS/2 2.1 and Windows NT 3.1 shipped, however, time switched sides.

NT's underwhelming debut and OS/2 2.1's ability finally to deliver on the promise of a "better Windows than Windows" tilted the scales in OS/2's favor.

Press coverage for NT started to turn sour over the summer. Major OS/2 applications began to appear from big players like Lotus and WordPerfect. Computer stores that only months before weren't interested in OS/2 not only started to carry it, but started to sell it briskly. Meanwhile, copies of NT languished on the shelves. Software developers started to wonder whether Microsoft's coattails were as secure a ride as they'd been led to believe.

That's the background against which Microsoft introduced the Chicago "alpha" late in August. Microsoft needed to do some-



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ZACHMANN'S VIEW

thing—anything—to try to regain the momentum that was slipping away from it.

The problem, though, is that what Microsoft had in hand was nowhere close to the OS/2 killer that was required. The Chicago alpha turned out to be nothing like the envisioned 32-bit, robust, fully preemptive, dynamically scheduled, multitasking, multithreaded operating system that would support both 16-bit DOS and Windows 3.1 applications and new WIN32 applications.

Instead, it is little more than a hacked-up version of DOS and Windows for Workgroups. Layered on top is a new GUI that looks like a pretty but limited-function imitation of the OS/2 Workplace Shell. While Chicago was immediately hyped by some of the trade weeklies as if it already had all the capabilities promised for it, in fact, it had nothing of the sort.

The Chicago alpha, for example, has no reliable support for multithreaded WIN32 applications, does no more multitasking than Windows for Workgroups does, is missing large chunks of promised functionality, and offers little more as a user interface than a new “pretty face” with far less functionality than the OS/2 Workplace Shell.

Last summer's Chicago pre-beta beta makes it abundantly

clear that Microsoft has a very long way to go before it is a finished product; it will take until at least late 1994. And unless major changes are made, the finished product will not be seriously competitive with a “real” operating system like OS/2—or, for that matter, NT itself. Moreover, making those major changes will delay shipping even longer, well into 1995.

It was rushed out, not even half-baked, primarily to try to forestall defections by software vendors impatient with the failure of NT to provide a volume platform for WIN32 applications. It was meant to show them that Microsoft has, in Chicago, a viable way to create a large base for WIN32 applications after all.

What it shows, however, is that Microsoft has nothing of the sort, and that OS/2 will go unchallenged, at least until nearly the end of 1994, by any Microsoft alternative capable of providing a truly robust 32-bit operating system that will run on the desktop systems users actually have.

The more closely software developers look at what is really there in the Chicago betas, the more obvious that will be to them. You can confidently expect that more and more of them will turn to OS/2 as a result. After all, isn't a bird in hand far better than one in the bush? ♦

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Q & A

A straight-talk interview on topics of professional concern

The Year in Review with **JOHN SOYRING**

A year ago, *OS/2 Professional* editors Edwin Black and Bradley Kliever interviewed IBM's John Soyring on the state of OS/2. As IBM PSP's director of software development, Soyring has his finger on the pulse of OS/2. At the time of the first interview, OS/2 was just selling its two millionth copy. Now, a year later, OS/2's installed base worldwide has surpassed the four million mark. Black and Kliever caught up with Soyring on October 18 at the OS/2 Professional Interchange in Palm Springs. Together, they looked back on 1993—the failures and successes. An edited transcript follows.

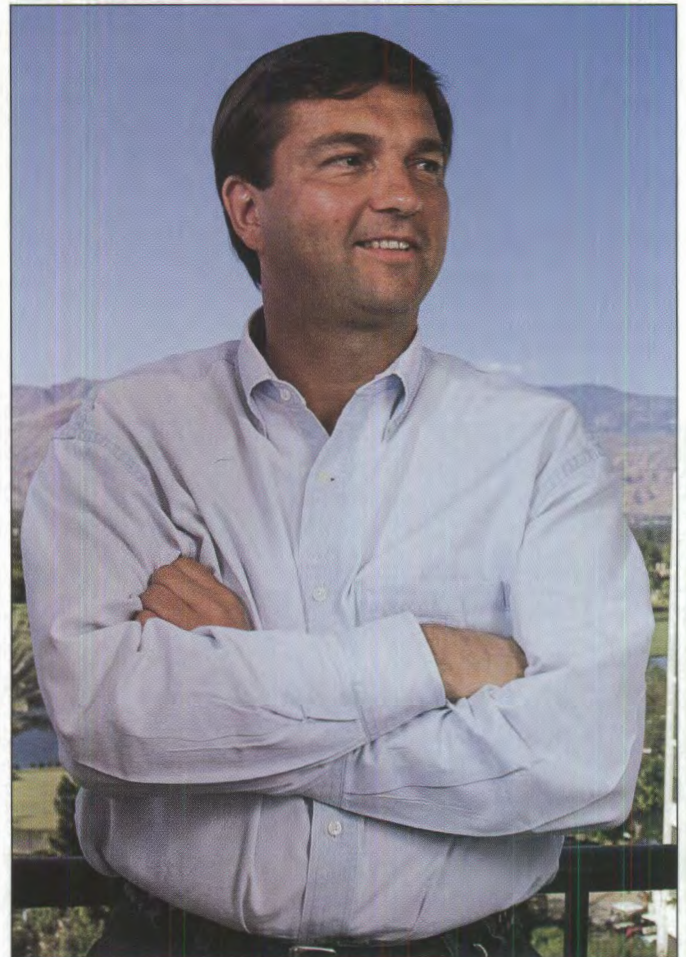
Edwin Black: About a year ago we sat together and discussed the prospects for OS/2. At that time, OS/2 2.0 was just hitting its two millionth copy at Comdex. Now it's just about a year later. How far has OS/2 come?

John Soyring: We've had a very exciting, hectic, and very busy year, as you well know, Edwin. You and your entire staff not only followed, but, in many cases, led us around to where we should be going. First, I look at our successes. As director of software development programs, I am of course viewing the year from the perspective of the software development worldwide. Let's look at the leading indicators—one by one. First off, since last year, when you and I first talked, there has been huge growth in the number of developers who have joined our Developer's Assistance Program.

What kind of numbers are you talking about?

Tripling. Tripling a huge base. But we don't release those numbers—we haven't released them to anyone, and we have no intentions to.

It's not six guys and now it's 18, is it?



Oh no, there are thousands.

Five digits?

Yes. To give you an idea: we had 1,500 join in a single day. That gives you the order of magnitude that we're talking about. Now it's free to join, just call our telephone number, (407) 982-6402, or on CompuServe type GO OS2DAP. But these are still real big numbers.

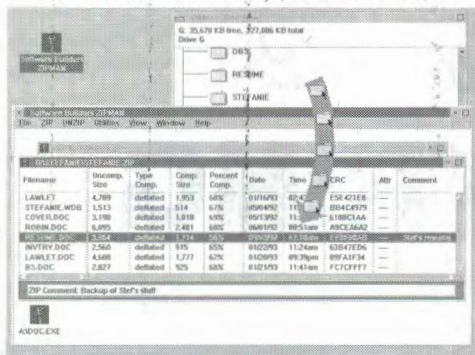
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Q & A

apps one day soon?

They certainly might. But what is also really encouraging is conferences such as the OS/2 Professional Interchange held in Palm Springs and the 13 other similar conferences that IBM and others held worldwide during 1993. Attendance has just been fantastic. As you know we turned people away at the doors in March at Phoenix, had huge turnouts in Orlando in August, and your conference was a tremendous success in October. That's also what we saw in the Far East and in Europe in the fall. But there's a point here. We charge for all of these. It means that developers are spending their time and money to come to these conferences in large numbers. That's another leading indicator that developers are allocating their time and resources to the development of OS/2 and OS/2-related applications.

Just what do OS/2 application developers need?

After they learn about the products and obtain education at conferences such as the OS/2 Professional Interchange, the first thing they need is to buy the tools to start developing. And OS/2-related tools vendors are indeed experiencing record sales and profit successes. At your own conference you gave Watcom International an award for its VX-REXX product. Watcom tells me they can't even get their sales reps to come to a celebration party because they are so busy taking orders late at night for the product.

What are some other success stories for OS/2-related tools?

Intelligent Environments is seeing record profits with their OS/2-related tools. Digitalk is having tremendous success with SmallTalk and Parts. Borland's C++ is selling well. IBM's own C++ is selling very well. So in addition to the conferences, programmers are putting down their money to buy application development tools.

In the publishing industry, take a look at what happened to *OS/2 Professional's* growth during the year. Developers were buying the magazine to get information and respond to tools advertising. I suspect a large percent of your subscribers are developers.

About 25,000.

Next leading indicator: developers are advertising their products. I think you and others have seen a growth in advertising. And sales are going up. So we're seeing huge investments of time and money in OS/2 and OS/2-related applications.

How's the market for applications?

Have applications delivered? There are some very good applications. Others are ports that people appreciate but are not very

Q & A

much distinguished from their DOS and Windows cousins. I mean they perform the same function and there are other applications shipping with a subset of the functions. Many of these vendors wanted a product in the OS/2 market and they got it out there quickly. But they could not or chose to not put all the functions in. So we see a mixture of applications. Admittedly, if it was an ideal world, we'd see extremely strong applications across the entire spectrum that I've just described. However, compare OS/2 with other operating systems such as Windows when it was first introduced. The first generation of Windows applications had mixed results. Some were very good. Some were "me too" applications. And some were actually less functional or less competitive than their DOS counterparts. But what happened to the next generation? Very competitive applications came out.

What is helping OS/2 developers become more competitive?

To make developers even more competitive there is VX-REXX, VisiPro/REXX, the Intelligent Environments Application Manager, Digitalk Parts, and many others. The second ones who did quick ports, we're working with them now to exploit the underlying OS/2 technology. They've gone through the learning, they've gotten the look of OS/2, and now I think you're going to see new applications emerging during the next 12 months. I'm very excited about them and I hope that when they appear on the market that the consumers will be excited too.

So part of it is learning the new programming paradigms?

Very much so. The programming of OS/2 is so much different than the programming of DOS or Windows or even Unix that many programmers have to learn an additional set of concepts in programming. Particularly in the area of multithreading and taking advantage of object technologies, there is a fairly large learning curve to ascend and a lot of developers have now moved that far.

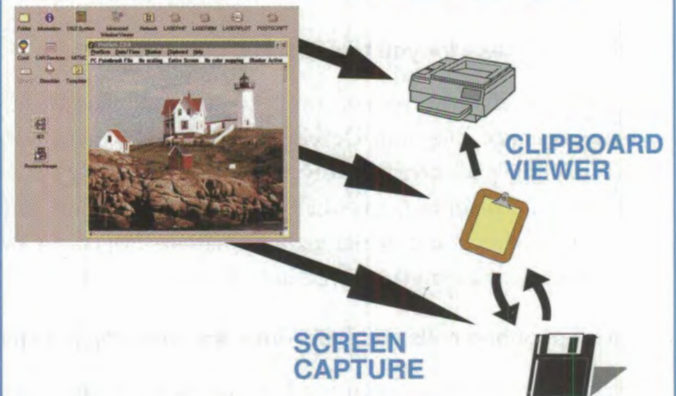
So that's why we're just starting to see some of the applications using SOM and drag-and-drop features.

Right. Exactly.

You've discussed some highlights. What were the weak points of '93?

Probably one of the weaker points during 1993 is that the growth in the number of the people in our Developer's Assistance Program was so phenomenally high that our ability to support them actually weakened. The number of people we had supporting developers simply didn't grow as fast as the number of developers. It has put stress on our organization.

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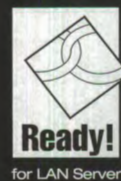


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Q & A

What does it take for you to support a developer?

We have basically two types of people in our worldwide Developer's Assistance Program. Developer reps are the evangelists who pound the pavement, identify people with potentially great applications, explain to them what our programs are, and then deliver the technical and marketing information. The others are support people who put these programs in place.

It's a lot of phone calls and labor-intensive activity, isn't it?

It's very labor-intensive. So during 1994 we expect to take more advantage of the electronic delivery technology that is available, just as you are with the fax delivery of your weekly newsletter *OS/2 Week* that keeps your subscribers up to speed on the state of OS/2.

How many developer reps do you have? Four digits?

On a worldwide basis? A fairly large number, but not four digits.

Does each developer rep have to service 10 developers? One hundred? Three hundred?

Well, it varies because the 80/20 rule clearly applies in this industry. A small number of vendors ship the vast majority of the applications and we certainly spend a lot of time with them. But there are also thousands of small companies with innovative products and we need to support them as well.

Now how does that little guy get your attention?

We can't afford to have one-on-one support for tens of thousands of software companies worldwide. So we have to be able to deliver technical support, information, and other types of support cost-effectively, usually by electronic means.

Let's look back on 1993. Start in January with the OS/2-Windows Conference in San Jose attached to Software Development. Success or failure?

A success from the Software Development '93 side. The number of developers was large, OS/2 had the largest presence of any vendor, and in fact that was one instance in which 1,500 developers signed up in a single day.

The other half of that coin says that the OS/2-Windows Conference was hardly a success because Miller Freeman had to abandon the name and switch to Business Software Solutions.

I think Miller Freeman, like the whole industry, is doing much more than just Windows and OS/2. Even we have another project called the Workplace OS that will be based on RISC and Intel. We have DOS still selling very well. I think perhaps Miller Freeman was broadening their perspective for the business users to the technology, and it's not just Windows and OS/2.

Phoenix, February 27. People still remember the first OS/2 Technical Interchange, held in Phoenix. Success or failure?

A tremendous success. Ironically, we received criticisms that people wanted a longer conference. So at the Orlando conference, we expanded to four and a half days. In 1993, we actually put on 14 of these conferences worldwide. The quality of them all has been extremely high. We make sure we bring in the top notch speakers as you did with the OS/2 Professional Interchange conference.



March 28, 12 noon—OS/2 2.1 does not ship. Success or failure? And the impact?

Certainly we would have liked OS/2 2.1 to ship earlier. A lot of people were beta testing—potentially 300,000 people were using OS/2 2.1 at all the sites. They told us that they loved it, but there were still some bugs left that we had to fix. That's why we took until mid-June to actually make it available to retail shelves. Our top priority has been and continues to be quality over meeting schedules. Now, what impact does that have? The delay did have an adverse impact because if people know the better product is out there, then why buy the current product? So April and May sales of the OS/2 2.0 went down.

Down to 10,000 per month?

I don't have the specific numbers. But the ISVs who would expect to ship at that time experienced cash flow pressure because their sales are directly correlated to the OS/2 2.1 sales. However, they

Q & A

also saw a huge spike in June going up in the opposite direction.

Late April. Bill Rich comes on as the new worldwide manager of marketing. Success or failure?

Success. No question about it. First of all, Bill has great influence through the IBM Corporation worldwide. He deals with the top level executives and gains commitments for additional support. So we've seen improvements in marketing in all of the geographies [IBM foreign divisions]. What's more, Bill, through his years at IBM, has established extremely strong ties with some of the largest corporations in the world. Through those ties we've been able to establish strategic relationships to customers that have yielded huge sales of OS/2 licenses.

May 18, Marriott Marquis Hotel in New York. The announcement of 2.1. Success or failure?

I wasn't there. From what I heard, it was successful. But on that day, I was in San Diego giving the keynote address at the Borland International Conference where Philippe Kahn and his team had 4,000 developers congregated.

Is this where Philippe Kahn asked how many people in the audience were using OS/2 and was astonished to see so many?

Actually Philippe was in the front row. He introduced me and I was worried because this wasn't part of my planned talk. I said "what the heck." I'm going to ask how many people in the audience are using OS/2. I thought maybe 20 percent might raise their hands and that would impress Philippe. But more than 50 percent of the people raised their hands. I just wiped the sweat off my brow and thought, "Wow, if all these Borland people are using it because they are using it to run DOS and Windows applications." I think that will have a very positive effect. Borland did ship Borland C++ for OS/2. It's getting very good reviews and the sales at such stores as Egghead are very strong.

What do you know about Paradox and OS/2?

You'll have to get your answer from Philippe.

Spring Comdex in Atlanta. OS/2 2.1 unveils. Success or failure?

Success. I went to both keynotes: Bill Gates' and Jim Cannavino's. No question in my mind, Jim outdid him. The reaction from the audience was that way too. NT was introduced at that time and it was viewed as not a very good announcement. OS/2 was launched and Jim gave an upbeat, exciting announcement and got very positive reviews. So I call it a success.



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Q & A

Monday, June 14, 10:01 in the morning. Stores open and the shelves are stocked for the first time in a long time with OS/2. Now 300,000 copies are either in the pipeline, in the back room, or on the shelf. Success or failure?

Big success. Big success. Actually, on Saturday the 12th, we shipped early for a big event at the Austin, Texas, Egghead. We had a demonstration machine set up with OS/2 and that Egghead set their all-time sales record that day, beating their number-two day which was when they introduced Microsoft DOS 6.0. They even beat their number-one day, their own grand opening day. Egghead attributed it to the sales of OS/2 2.1. And we've seen that replicated in more and more retail outlets around the country.

And how long before the shelves were cleaned off?

The stock at that particular Egghead store lasted to the end of the day. Many other resellers during that first week reordered several times. Although we shipped a large number, it was still lower than the demand was those first few weeks.

Aug. 16, NT releases. Success or failure? Impact on OS/2?

No question, it's a success for OS/2. Positive impact on OS/2 because prior to that it was OS/2 versus vapor—promises of what NT was to be. So after that date we were able to do famous shootouts on similarly configured machines showing OS/2 as the clear winner. The Houston Area League of PC Users voted overwhelmingly in favor of OS/2 after their shootout and we've seen that elsewhere. Plus, on large corporate bids, Microsoft, to our benefit, was telling their customers they need such features as 32-bit addressing and preemptive multitasking. But when customers were able to really get their hands on NT technology and look at what drives their current 386 and 486 machines with 8 megabytes of memory running their DOS and Windows applications as fast or faster—it turns out the answer is OS/2. So we've won bids because of the assistance—if you will—of the NT technology saying this is what the corporate environment really needs. But which systems provides it best today? It's OS/2.

Aug. 27, PSP Technical Interchange in Orlando. Success or failure?

Overwhelming success. No question about it. We scheduled about a half a dozen new product rollouts. But then as vendors heard about the show, they jumped on board, and we had a lot of impromptu press meetings introducing new products.

Oct. 17, Palm Springs. The OS/2 Professional Interchange. Success or failure?

Oh, no question about it—a success. Again, another huge audi-

Q & A








ence. I stood up on the podium and looked out and couldn't even see the back of the room. Every seat was filled as far as I could see.

Do you see any special gains from the other side, from the NT side during Q4 of 1993?

Just bug fixes. Flyswatters. I'm being a little bit flip with my answer, but I think they have so much work to do if they want to compete with OS/2, to run DOS and Windows applications as well as reliably run the 32-bit applications. First of all, regardless that it's called version 3.1, it's the initial release of a huge operating system—huge meaning a lot of functions in addition to taking a lot of disk space and memory. You need time to test such a system with applications to make sure it reliably runs. OS/2 has been through many releases and we've been able to work out a lot of bugs. That's important to our corporate customers who know that they've been able to test and now have a system that can reliably run their business. I think NT has a long road to go and OS/2 is here now.

Thank you, Mr. Soyring. ♦

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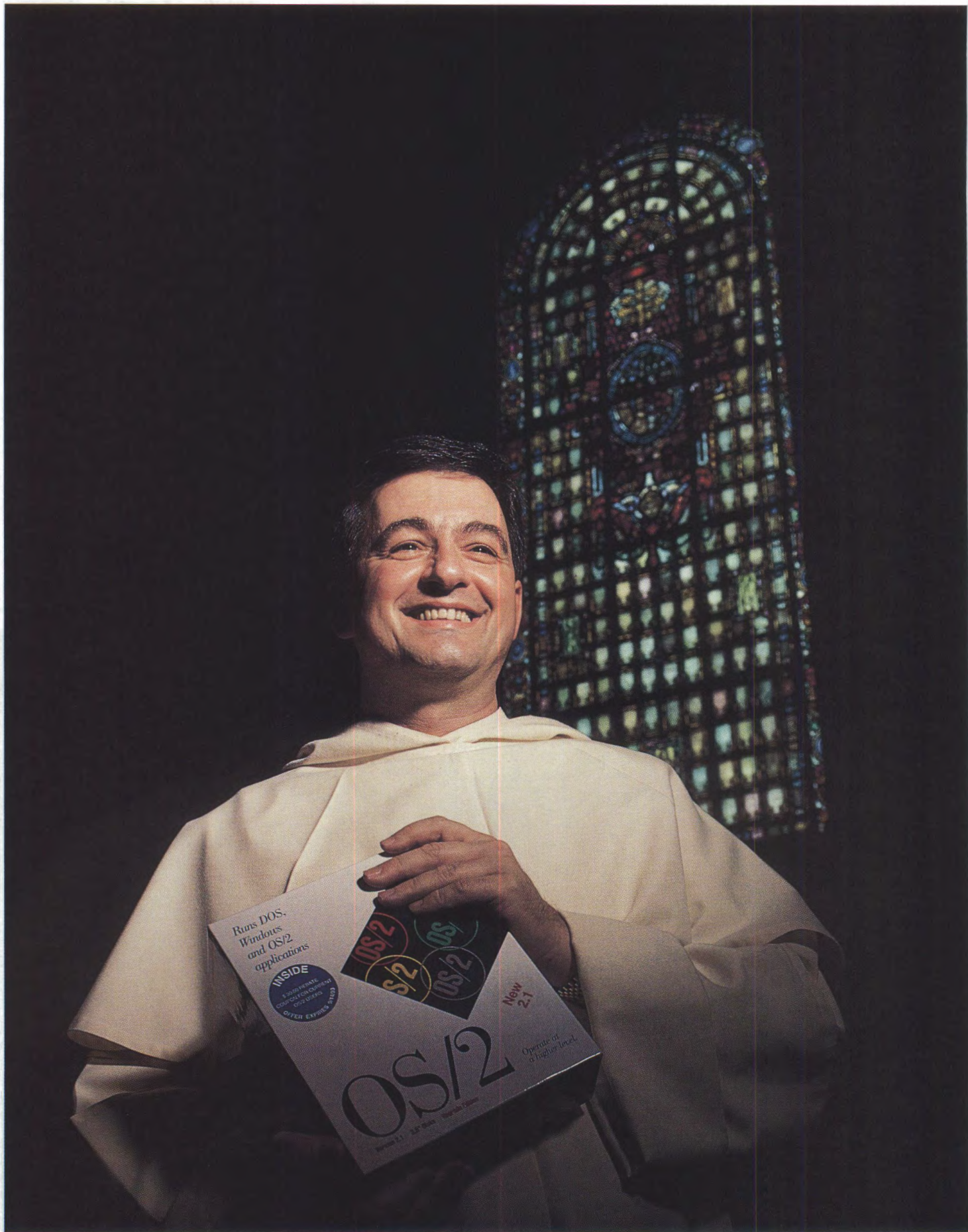
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USER PROFILE

OS/2 ZEALOT

When Windows tested Father Gregory Salomone's patience, he discovered OS/2. But unless IBM makes some serious changes Father Gregory may lose his faith.

BY JULIA KING

Wull off traffic-snarled City Line Avenue and onto the sprawling green campus of St. Charles Seminary just outside of Philadelphia, and a sense of serenity immediately envelops you. On this brilliant fall afternoon, young men dressed in black cassocks stroll under decades-old maple and sycamore trees with leaves hinting of scarlet and gold.

Once inside the main building, the seminarians make their way to afternoon classes, crossing a cavernous marble-floored lobby dominated by a larger-than-life sculpture of St. John the Evangelist. Beneath the folds of his cloak, St. John's bare foot rests inches away from the talons of an equally larger-than-life eagle.

"St. John the Evangelist is always shown with an eagle because his writing is so mystical," explains Father Gregory Salomone, the seminary's resident instructor of Greek and 28-year veteran of the Dominican religious order. "His is writing that takes flight." Pointing to another massive statue at the opposite end of the lobby, Father Gregory introduces St. Charles Borromeo, a 16th century archbishop of Milan who is noted for preaching the merits of regular confession.

Today, it is Father Gregory who has a confession to make. Despite being the subject of a magazine profile on a successful user of OS/2, he isn't exactly optimistic about the operating system's chances for survival.

He's also more than a little annoyed with IBM, which to his mind is shooting itself in its Big Blue foot by not being more aggressive about getting OS/2-based software packages on store shelves.

"Now you may not want to print this, but my biggest problem is that IBM, for some reason, doesn't want to push OS/2," Father Gregory confides. With little OS/2 software available, the operating system will soon disappear, he reasons. And that, he says, would sorely disappoint him, "because I think IBM has really got something here. I think they've got more than they realize, and I think it's going to go down the tubes if they don't do something to push it, and soon."

Father Gregory, 49, is the first to admit to being something of an OS/2 zealot. His conversion, he says, was both immediate and profound, occurring the first time he

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USER PROFILE

tinkered with OS/2 2.0, which he had read about in a computer magazine; he ordered it directly from IBM the same day.

Up until then, he used Windows as an operating system to run Ami Pro word processing software from Lotus, Ventura's desktop publishing system, Borland's Paradox database management package, and a solitaire card game to which he's addicted.

"I had Windows crash on me several times, and I would lose everything," he recalls with chagrin. "Because the crash would come suddenly, I wouldn't have everything backed up."

Even when Windows performed up to spec, it tested his patience. These tests would usually come after Father Gregory had written the monthly recruiting newsletter he publishes, and was in the process of printing copies for the 300 or so people on his mailing list. "When I was doing a mail merge with Windows, I was stuck without a computer while waiting for the printer to finish," he explains. "Until the printing was done, the whole system was slower, and it was a waste of my time. I had to find a way around it."

The way Father Gregory found was OS/2, under which he reluctantly continues to run Windows and Windows-compliant applications due to the absence of OS/2 versions of the software packages he uses on a daily basis. "But my desire," he reiterates for the third time in less than a half-hour, "is to go over completely to OS/2 and avoid Windows entirely."

That, of course, can't happen until more OS/2 software is available to buy. And from all indications, including information he has personally sought from vendors, very few of the big software houses have immediate OS/2 plans. "So, I'm slowly getting the feeling I'm on a sinking ship," says Father Gregory, adding that he'd hate to see OS/2 go the way of IBM's ill-fated PC Jr. computer.

It's at this point that one gets the impression Father Gregory would love nothing more than to cast off the hooded white robe of a Dominican for a day and trade places with a blue-suited OS/2 marketing executive. After all, Father Gregory does have a good deal of marketing experience. Before assuming his seminary teaching post this past June, he spent nine years criss-crossing the country as a recruiter for his religious order.

If he were calling the shots up in Armonk, he says, IBM would be intensifying and expanding its subsidy of OS/2 software vendors as a means of satisfying OS/2 users hungry for application packages. Also, IBM would no longer keep an OS/2 user waiting weeks and even months for requested information. Nor

USER PROFILE

would users be required to buy a second set of OS/2 diskettes to run on their portable computers. Last but not least, all IBM PCs and portables shipped out for sale by retailers would come bundled with OS/2 as well as a suite of OS/2-based application packages.

Were policies like these in place at IBM over the last two years, Father Gregory might not be so pessimistic about the future of OS/2. But IBM has not answered his prayers, leaving him doomed to experience all of the problems he describes. For example, it was only this morning that IBM faxed him a data sheet on Relish, its OS/2-based calendaring application. He had requested the information three months ago, back in early July.

Then there was the time he tried—unsuccessfully—to buy an IBM ThinkPad portable PC equipped with OS/2. “I had just seen an IBM advertisement for OS/2 that said ‘Demand that OS/2 be loaded on your next computer,’” Father Gregory recalls. Needing a portable PC and already an OS/2 convert, he called IBM and did just what the company’s ad directed him to do.

“I called and said I want OS/2, and they said they couldn’t do it,” he recalls.

“I was told you have to buy OS/2 separately. So I wrote them a letter and told them it didn’t make sense.” Then Father Gregory went out and bought a portable by NEC.

Still, none of these unfortunate episodes with IBM has stopped Father Gregory from preaching the merits of OS/2 to his 40 fellow priests and teachers at St. Charles, where he is keeping the faith as the only OS/2 user. Ask him why, and the OS/2 zealot in Father Gregory again begins to surface. “Because I think it’s a better program than Windows,” he says. “First of all, it’s an operating system, rather than a means of dealing with an operating system like Windows is. It’s also very easy to use and is exactly what they say it is—more like my desktop than anything else.”

But Father Gregory, appropriately enough, is not a man without hope. IBM, he says, could redeem itself. First, however, it must acknowledge the marketing and customer service mistakes it has made with OS/2. Then, it must atone by listening more closely and responding quickly to its loyal base of OS/2 users and would-be users.

Could it happen? It’s always possible. Remember, Father Gregory is one OS/2 user who still believes in miracles. ♦

Julia King is a freelance writer based in Ridley Park, Pennsylvania.



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BEST HARDWARE:

Lexmark Laser Printer 403910R • Lexmark International

OUTSTANDING IBM EXECUTIVE:

Bill Rich, General Manager, IBM PSP World Wide Sales & Marketing

CORPORATE COMMITMENT:

Lotus Development Corp.

TEAM OS/2:

Dave Whittle

MARKETING AWARD:

IBM and Lintas: New York for The Roadblock

MEDIA AWARD:

Peter Coffee

OS/2 PRO OF THE YEAR:

Ted Salamone, PSP Merchandising Manager



Edwin Black, Greg Schumacher (Lotus), Peter Hayes (IBM), John Egan (Lexmark), Peter Coffee (PC Week), Terry Stepien (WATCOM), Rich Running (WordPerfect), Ted Salamone (IBM), and Brad Kliever.

OS/2 PROFESSIONAL AWARDS



A true community is one that supports its members. That support can take many forms, but one of the most important is recognizing members who do more than their share—whose actions better not only themselves but all of us.

That's the spirit in which we created the OS/2 Professional Awards: To acknowledge those who have most helped to build OS/2 the system and OS/2 the community.

The first annual OS/2 Professional Awards were presented at the OS/2 Professional Interchange held in October in Palm Springs. The Awards ceremony, honoring the individuals and companies that had the greatest impact on the OS/2 world in 1992-93, was held pool-side at the Interchange's Casbah reception. In keeping with the reception's theme, *OS/2 Professional* Editor-in-Chief Edwin Black, dressed in an Aladdin costume, rode in on a camel to open the ceremony. IBMers John Soyering and Lois Dimpfel, as well as the magazine's top editors and writ-

ers, were on hand to present the awards. The evening was a procession of surprise announcements, as each envelope was opened and a representative of the company or the individual was called to the pool-side stage for acceptance.

Each award was a stunning rough sculpted curved glass trophy with the recipient's name and magazine logo sandblasted into its midst. The award was designed by the magazine's art director, Elizabeth Black, and produced by Kensington Glass Art studios.

Behind the glitz and show biz of the ceremony was a very serious process, though. In the months following our announcement of the Awards last summer, our readers sent us a constant stream of suggestions for every category, as well as their many nominations for the Reader's Choice Award. In addition, we requested suggestions from the magazine's extended circle of editorial professionals.

All suggestions were screened by the Awards panel, which con-

FEATURE

sisted of Edwin Black, Bradley Kliewer, Rich Malloy, David Moskowitz, Wayne Rash, and Will Zachmann. The final nominees—two to a half-dozen in each category—were then discussed and choices debated through a series of conference calls and faxes, culminating in a vote—often a split decision—to select the winners. The Reader's Choice Award, on the other hand, was entirely your pick; all we did was tabulate your nominations.

The discussions weren't easy. More than once, the judges contemplated a great new application that had just gone gold—but which had not been available during the previous year covered by the award. Advertising played no role: some of the magazine's most important sponsors didn't survive the final cut. Some that never advertise were ultimate winners.

In two cases, the judges elected to split the award. The Best Software Award was divided into Tools and Applications categories. The marketing award was split so we could acknowledge both the client and the ad agency creating the campaign.

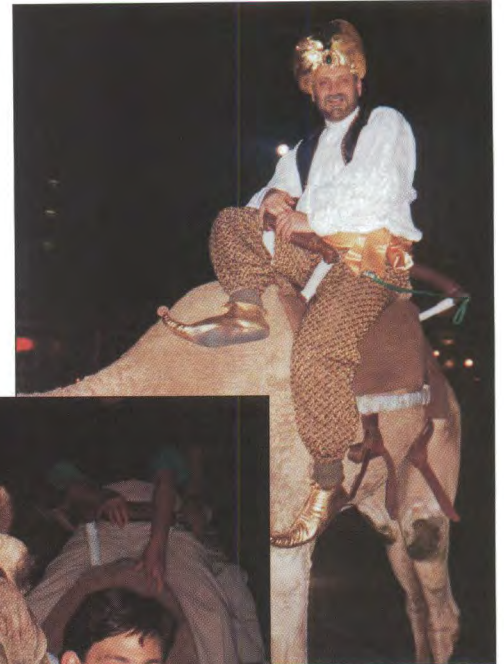
You bet there were plenty of surprises, not the least of which was awarding IBM and Lintas: New York the Marketing Award. Readers will recall that the magazine has cracked enough jokes about the winning campaign to keep *Seinfeld* busy for an entire show. Indeed, the magazine iconized the "camel" as the symbol of IBM advertising—a horse created by an IBM marketing committee. But the Awards process was a time for all the funny stuff to be set aside and for real merit to be recognized.

What's more, because the OS/2 movement is a community of excellence involving people as well as companies, the Awards process was as concerned with honoring individuals as enterprises. That's why there were as many award categories for personal excellence and devotion to OS/2 as there were for snazzy products and corporate stamina.

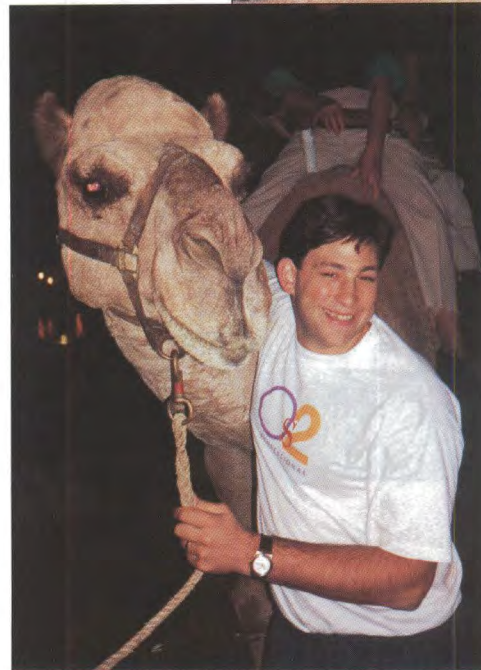
We believe the first year's awards were successful in accomplishing our goal of offering thanks and reinforcement for good works. But there's more to be done. So *OS/2 Professional* will soon be expanding its Award series. Watch for the announcements soon.

As for the Interchange itself, with the crowds at the Marriott clamoring to do it again, the magazine has decided to sponsor a second annual Interchange. The date is Oct. 2-5, and it is once again in the Desert Springs Marriott. The Interchange toll-free telephone line is still operational—just call 1-800-GET OS20.

Be there. And book your camel early. ♦



Edwin Black makes an entrance to the Awards Ceremony and "Meet Me at the Oasis" theme party.



The OS/2 camel and Rich Dubin, OS/2 Professional's advertising director, mug for the camera. Following the Awards ceremony, guests enjoyed camel rides and ample buffets of Middle Eastern food. Photos: Brendan Connors.

FEATURE

Best New Application:

cc: Mail for Workplace Shell
Lotus Development Corporation

Released: June 29, 1993

Features: Traditional e-mail features including inboxes, message folders, bulletin boards, and directories as desktop objects; message template object, shadowing, and background processing through multithreading.

Price: \$495 per platform pack.

"Thanks to *OS/2 Professional* for awarding cc: Mail the 'Best New OS/2 Application.' It's a great honor from a great OS/2 publication. We also thank IBM for the object orientation provided by its SOM technology and for the 32-bit power of OS/2 2.1. Without this solid platform it would not have been possible to build such an innovative and 'award winning' e-mail client." Greg Schumacher, OS/2 marketing manager, Lotus Development Corporation. (John Soyring presenting.)



Best New Development Tool:

WATCOM VX-REXX 1.01
WATCOM International

Released: June 21, 1993

Features: Graphical creation with CUA'91, multithreading, SOM, full REXX support, and drag-and-drop programming.

Price: \$199

"*OS/2 Professional's* award for the 'Best New Development Tool' recognizes the impact that WATCOM VX-REXX has had in a short period of time by enabling a broad new class of users to rapidly create rich GUI applications for OS/2." Terry Stepien, marketing director, WATCOM International.



Best New Application, Reader's Choice:

WordPerfect 5.2 for OS/2
WordPerfect Corporation

Released: July 1993

Features: Workplace Shell integration; WordPerfect Automatic Document Detection, enhancement notebook, details view, full-drag-and drop with data objects, graphics, and spreadsheets; multithreaded background printing, HPFS support, flexibility of WP ruler, and button bar view.

Price: \$495

"I think *OS/2 Professional* put on a great show at the awards ceremony. It brought together great accounts, great developers, and great voices in the OS/2 community." Troy Monney, product marketing manager, WordPerfect Corporation. (Accepting above, Rich Running, Director of Marketing.)



Best Hardware:

Lexmark Laser Printer 403910R
Lexmark International

Released: April, 1993

Type: Laser

Pages Per Minute: 10

Memory: 2MB standard, expandable to 16MB

Price: \$1,599 list

Best known for: Price Performance

"We are really working hard to bring products to the marketplace that our customers want. To win this award was very meaningful." John Egan, account executive, Lexmark



International. (Michael Kogan presenting.)

Outstanding IBM Executive:

Bill Rich, General Manager, IBM PSP World Wide Sales & Marketing

Joined IBM: 1962

Started as: Salesperson in Data Processing Division

FEATURE



Work with OS/2: As the Number 2 man in PSP, Bill Rich has turned OS/2 marketing into a world class project. "Bill has great influence through the IBM Corporation worldwide. He deals with top level executives and gains commitments for additional

support. So we've seen improvements in marketing in all of the geographies [IBM foreign divisions]. What's more, Bill, through his years at IBM, has established extremely strong ties with some of the largest corporations in the world. Through those ties we've been able to establish strategic relationships to customers that have yielded huge sales of OS/2 licenses." John Soyring, PSP director of software development.

Corporate Commitment:

Lotus Development Corp.

"With SmartSuite for OS/2, we've delivered the first full desktop suite of industry-leading business tools for the fast-growing OS/2 customer base. These applications further demonstrate our commitment to cross-platform development, with the goal of providing users with the best, broadest choice of desktop applications. We are honored by *OS/2 Professional's* Corporate Commitment Award and view it as confirmation that we are headed in the right direction for OS/2 customers." Dave Laverty, director of SmartSuite marketing, Lotus Development Corporation. (Greg Schumacher and Georganne Nattress display Lotus' two awards.)



Team OS/2:

Dave Whittle

Involvement with OS/2: Team OS/2 is an all-volunteer group of enthusiasts promoting OS/2. The group is "not bounded by time or space or

anything" except a love of OS/2 big enough to go above and beyond. Since its founding in 1992, the team has been deliberately leaderless. Dave Whittle is the founding member. On receiving the award: "I think it's great. I really appreciate it." On the future of OS/2: "Nothing but bright." Dave Whittle, IBM Team OS/2.

Marketing Award:

IBM and Lintas: New York for The Roadblock

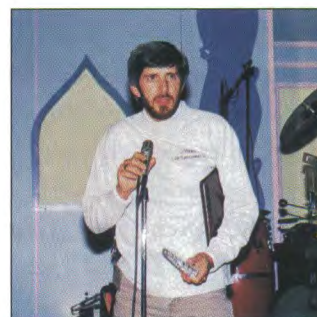
Relationship Established: 1988

Roadblock Campaign: The so-called "Roadblock" was an innovative concept in advertising that literally stopped the



magazine reader with a sequence of signature ads. The extended unit, often up to 12 pages in a given magazine, opened with an IBM intro ad, often a two-page spread declaring, "Now's your chance to run the World." Immediately following were a sequence of right hand pages, each promoting a different OS/2 application, such as CA-Unicenter, CorelDRAW, or Relish. The unit proved to readers the variety and versatility of available OS/2 applications.

"I am thrilled to accept this award. This is just another key indicator of the success of OS/2 and related application products. We're extremely excited by the success of OS/2 and plan to continue the momentum in the future." Peter Hayes, PSP director of communications, accepting on behalf of Lintas and Wally Casey, director of marketing.



Media Award:

Peter Coffee

First OS/2 Story: 1987/ *PC Tech Journal* (now defunct Ziff-Davis publication)

Employed by: *PC Week*

On receiving the award: "I admire the spirit of professional courtesy that *OS/2 Professional* has taken in highlighting contributions to the discussion of users choices, whether published by themselves or by others."

FEATURE

On the future of OS/2: "The continuing drop in the price of a fully OS/2 capable machine means continuing growth in the market of buyers who merely want an operating system that runs almost all the software they can buy. OS/2 is perfectly positioned today to exploit this trend."

OS/2 Pro of the Year:

Ted Salamone, PSP Merchandising Manager

Years with IBM: 5 years

Position started in: Program Manager Software Acquisition

Years with OS/2: Since 1992



On receiving the award: "I was very gratified and appreciative of the recognition of my efforts to promote OS/2. I thought the OS/2 Professional Interchange was very well run, and it presented an excellent balance of serious work and an opportunity for relaxation and networking. With respect to

the future of OS/2, OS/2 is growing its own future." ♦



A Middle Eastern feast was served up poolside as honored guests reclined on pillows to enjoy the banquet.

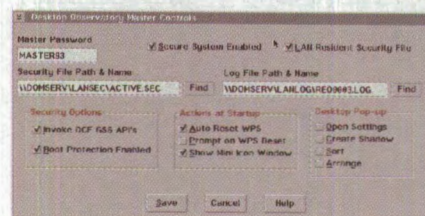
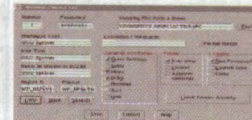
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Getting the Fax Straight

SofNet is on the move. Now, if it only can get its name out front...

BY MIKE FILLON



SofNet is settling into its new quarters in one of the office parks that seem to spring up overnight like kudzu in the north Atlanta suburb of Marietta, Georgia. The October move marked the third time the software company had to find larger office space in the past three years.

But this move was different. This time, SofNet's employees got to hire moving vans, rather than having to load up their cars, rent trailers, and lug the boxes and furniture themselves.

There's another problem, though. SofNet's new office, situated to the left of the huge red brick arch that marks the building's entrance way, is still not listed on the lawn sign, and there's no sign on its front door.

For a company that is determined to keep on growing—the staff has doubled to 40 people in the last year—the lack of identification signs grates on Harland LaVigne. The instructions that LaVigne, who in June became SofNet's third CEO, got from the private company's owners were clear. He was to grow the firm, which makes and markets the FaxWorks line of fax software, from its current \$5 million in sales to between \$20 and \$25 million in five years.

But for LaVigne, who has spent the last 25 years managing high tech companies, not being able to get the company's name on the door seems to bother him more than the sales challenges that lie ahead. On that latter front, "We are already in the process of moving to that level through internal product development, improved distribution, and acquisitions," he says.

That doesn't mean he thinks reaching that level is going to be easy. "Any company the size of SofNet is struggling to reach the next plateau, and we are all addressing the same issues—that is, having the marketing horsepower to get the recognition of both your company name and your products in front of the buying masses. That is our challenge every day, since the best technology doesn't always result in success of the company."

And the masses are buying. BIS Strategic Decisions forecasts the computer fax hardware/software market will grow from just over \$1 billion in 1993 to nearly \$3 billion by 1997.

To increase its share of that growing market without blowing the company treasury, SofNet is placing more emphasis on agreements with hardware vendors. In effect, LaVigne's approach is to get other companies to sell his company's products with theirs.

In the summer of 1992, SofNet began signing OEM agreements with some of the largest fax modem manufacturers—Boca Research, Cardinal, Hayes Microcomputer Products, PC Logic,

Pure Data, and others—to bundle the FaxWorks OS/2, DOS, and Windows products with their modems in place of the stripped-down "lite" software packages they had been including in their boxes.

"The [SofNet] software we're bundling with is not a scaled-down version, so it helps differentiate our product on-shelf," explains Tom Garrett, vice president of domestic sales for Boca Research. "The combined offering of Bocamodem and FaxWorks gives our customers a high-powered fax solution at an affordable price."

SofNet hopes that once the user tries the software, he or she will upgrade by adding features such as optical character recognition and data management tools. The idea is to sell product and at the same time develop SofNet's identity in the marketplace. "Our whole idea is to build as much mind share as market share," explains LaVigne.

Prior to the introduction of FaxWorks, the company wasn't in control of its own fate. Founded in 1990 and owned by a combination of venture capital firms, private investors, and the company's employees, SofNet sold a line of products named Faxit, developed by Alien Technology. (The line subsequently was bought by Digital Communications of Alpharetta, Georgia.) But there were problems. The product wasn't distinguishable enough in the marketplace. When there were bugs, or if SofNet wanted changes made, it involved a complex, time-consuming process.

"It was very difficult from an engineering standpoint to try to control the Faxit code and fix bugs and perform technical support when we weren't in control of the code," explains Suzanne Stewart, an original company employee who is now marketing communications manager. "So we started looking for our own technology, which we got, and now we publish our own."

The FaxWorks line first appeared in late 1992, with the OS/2 and the OS/2 for LAN products introduced in March 1993. Some of the development of the code for the FaxWorks OS/2 product was done by the Keller Group in Minneapolis; SofNet licenses the code from it. With Keller, though, SofNet can manipulate the code anyway it needs to.

The FaxWorks OS/2 version 1.3 product supports all standard fax modems including Classes 1 and 2, Brooktrout and Intel Sat-isFAXtion boards, and allows users to send faxes directly from any OS/2, DOS, or Windows application. Using OS/2's multitasking capabilities, it's possible to send to one or multiple destinations, receive, and print faxes in the background while doing

VENDOR PROFILE



SofNet employees preparing for Fall Comdex.

other tasks. The product also offers on-screen annotation/editing tools, fax merging, and supports notebook computer "suspend" mode fax reception. Optical Character Recognition (OCR), which translates the graphic image of a fax into editable text or characters, is available as an add-on option.

The single-user version retails for \$149. Ten (\$699) and unlimited (\$1,999)-user LAN versions are available with multiboard (\$499 per channel) and DOS/Windows client (\$499) options available.

FaxWorks's OS/2 LAN product is compatible with virtually any PC-based LAN including Novell's NetWare, LAN Server, Lan Manager, Banyan VINES, LANtastic, and many others. It can alert a user when a fax arrives so he or she can view, save, or print it. Other features include public and private phone books, DID and DTMF inbound routing, support of fax merging, and automatic client configuration from any PC. It does not require a dedicated fax server.

Users of SofNet's OS/2 products give them high marks. "I'm very pleased with the quality of the product," says Jim Murdock, who is responsible for finding software for Kemper Insurance in Chicago. "I can integrate it with any software running on my PC, and I can send anything as a fax. It's very simple to use." Kemper uses both the standalone and LAN versions of the product.

Adds Jay Carter, a software technician for Ralston Purina in St. Louis who also uses both the OS/2 offerings, "I like how simple it is to use and its stability. I don't recall the product ever crashing on me."

To further increase its market share, SofNet also plans to sell



its fax products bundled with PCs. "We are working on that market right now," says Wally McCourt, SofNet's OS/2 product manager.

SofNet's goal is to derive 40 percent of its sales revenues from its deals with modem and PC manufacturers by the first quarter of 1994—it was at 33 percent in 1992 with just its modem manufacturer agreements. At the same time, it expects to capture 40 percent of the overall modem market; it now has about 20 percent.

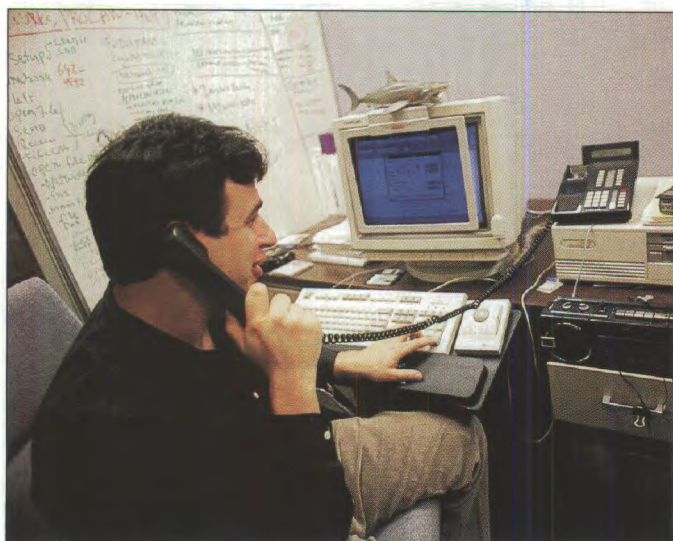
SofNet has also beefed up its telemarketing staff selling to corporate accounts. Tucked away in gray cubicles, six reps are constantly on the phones urging corporate accounts to try the products. "The firm is very friendly, helpful, and willing to work with you," says Carter. "They are very good about sending evaluation software and letting us run it in a number of our plants for a good long period of time. I feel they are very confident in what they have and what they obviously believe in. You don't always get that from larger companies."

The telemarketing goal is the same as for OEM agreements: increase their percentage of sales revenues derived from telemarketing from 33 to 40 percent. As a result, SofNet expects retail sales percentage to drop from one-third to 20 percent.

LaVigne says the strategy already is paying dividends. Prior to March 1993, when its first OEM agreement with Boca Research was signed, SofNet's installed base was 100,000 units. Since the OEM agreements were signed, LaVigne says, the company is on target to install its one millionth package by the end of the year.

By the first quarter of next year, the company will add voice capabilities to its products. With new fax boards carrying chips

VENDOR PROFILE



that can handle voice as well as fax, PCs will be able to distinguish among voice, fax, and data traffic—if they have the right software. With it, PCs could serve as message centers, allowing retrieval of all communications, regardless of the medium, by users on the road.

For now, the CEO is pleased with the success the company has achieved, particularly with the OS/2 version of FaxWorks.

"We do have an excellent OS/2 product," boasts LaVigne. "Even though the OS/2 operating system doesn't have the volume that the Windows operating system has, as an early adopter there aren't nearly as many competitors for us in the OS/2 market. Plus we have a very strong relationship with IBM, and get a lot of technical support as to what's going on with OS/2, and early indications of what changes are coming, and we participate in their marketing programs. For a small company like us, that is a major benefit."

But there is another, more fundamental, reason for the success of its OS/2 product. "They have very little

At a Glance:

SofNet Inc.
1110 Northchase Parkway,
Suite 150
Marietta, Georgia 30067
(404) 984-8088 (voice)
(404) 984-9956 (fax)
Founded: 1990
Number of employees: 40
1992 sales: \$5 million
Estimated 1993 sales: \$7 million
Ownership: Privately held



competition in that market right now, so it is a big revenue producer for them," explains Janet Fugazzotto, a senior market analyst at BIS Strategic Decisions.

Presently only one other company sells OS/2 fax products, a French-owned firm, Microformatic, represented by American TeleRep in North America. But since business abhors a vacuum, there could be others on the way, especially as OS/2 builds its foothold in corporations, warns Fugazzotto. "With vendors developing Windows NT Fax Server products, which is a technology similar to OS/2, they may also go ahead and develop an OS/2 version, so there may be more competition in that area." She notes, "Still, I think that they have emerged, or have the potential to become, one of the leaders of the fax software market."

But to get there, will SofNet de-emphasize OS/2? SofNet says no, but it could happen. According to La Vigne the company is scheduled to introduce shortly two new Windows LAN products, including a high-end product for the Novell market that will carry a list price of \$3,995. By comparison, the FaxWorks OS/2 product sells for only \$149. Add that to Fugazzotto's forecast that the total after-market for OS/2 fax software, which is only 0.3 percent of all fax software presently, will rise to just 0.7 percent by 1997.

For now, though, La Vigne has more pressing concerns than his product allocation—concerns like getting SofNet's name on the door. ♦

Mike Fillon writes about the computer and telecommunications industry from Tucker, Georgia.

WHEN SYSTEMS



SPECIAL REPORT

INTEGRATORS RIDE INTO TOWN...

more and more often they're packing OS/2

BY TIBBETT L. SPEER

When it comes to establishing OS/2 as the operating system of choice for businesses, systems integrators wield more power than IBM's most determined marketers.

These independent experts make their living by recommending and installing technologies to solve business problems. Un beholden to particular vendors, integrators report they are choosing OS/2 as a business computing environment because they believe it's the best microprocessor-based system out there.

"In their own words, 'It's robust and it's industrial-strength,'" says Brian Wessner, formerly the systems integration program manager at Input, a market research firm in Mountain View, California.

Sears, Payless Shoes, and Prudential Insurance are just some of the industry giants that rely on OS/2. True, the IBM desktop OS has a less than commanding presence: Input reports that of the 148 million worldwide installations of the top five operating systems as of the latest available figures, for May 1993, OS/2 accounts for roughly 2 percent. (The remaining systems: DOS, including Windows/DOS, 81 percent; Unix, 17 percent; AS/400, less than 1 percent; Microsoft NT—100,000 beta sites.)

But integrators see things differently. "While OS/2 is said to only have a small percentage of the market, for our Fortune 1000 client base, it appears to have a significantly greater presence," says Jerry Grochow, vice president and chief technology officer of American Management Systems, an SI consultancy in Arlington, Virginia.

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Chalk that up in part to the phenomenon of the coattail. Big companies tend to be IBM-based—have been since the walls of the glass house first went up. It's natural for them to tend to stay that way.

That's only part of the explanation, though. OS/2, particularly version 2.1, was until recently the only choice for a solid 32-bit operating system on which to migrate to on Intel architecture-based machines. With the invasion of NT, however, that is no longer a given. Microsoft money, plus Microsoft talent, plus the familiar GUI makes for a powerful competitor. But businesses—and the integrators who advise them—need solutions now. OS/2 remains the mature, reliable system of choice for running mission-critical applications.

An Enduring Relationship

Grochow, the American Management Systems executive, started his relationship with OS/2 before it even had a version number. Back in 1988, he was involved with alpha and beta testing. His obligations stopped when the OS went gold, yet to this day he uses OS/2 as the environment for his own desktop system. As a consultant, he recommends OS/2 to about one-quarter of his clients—a percentage he says mirrors common practice in the systems consultant industry.

Grochow's recommendations are based on a variety of factors, including what he sees as OS/2's chief selling points: multitasking, a friendly user interface, and reliability. But he also factors into his recommendation what the client is already familiar with, the performance capacity of its servers—and, not insignificantly, his confidence in OS/2's future.

Grochow estimates his Arlington, Virginia-based company has installed OS/2 for “a couple dozen clients.” Many were upgrading from DOS, but some were putting in their very first workstations. Last spring, Barnett Bank in Florida became one of the latter.

The bank's international trade department included about 100 employees who used 3,270 terminals to process letters of credit. A reengineering study revealed that the mainframe usage costs the bank more than client/server technology would. Over the course of several months, AMS replaced the terminals with workstations and servers.

This project came along too soon for Windows NT, although not for Windows. “It's not acceptable to have an application bring down the whole operating system,” Grochow says of Windows. “While the current release of Windows is a lot better than earlier

releases, you still get a lot of that.”

You can solve the reliability problem by going to Unix, he notes. “But I see a lot of resistance to going to Unix on the desktop in organizations where they haven't done it yet.”

As NT invades the scene, Grochow sees it growing, in time, into a robust operating system that will be a strong competitor to OS/2. “The key words are ‘in time,’” he says. “It's unrealistic to think that NT will take over the market in just a few months.”

Does he think NT will drive OS/2 out of the market? Not likely, says the consultant. “I believe OS/2 will always have a certain market share.”

Major Improvements

The vice president for technology at Houston, Texas-based BSG Consulting has a slightly different take on Windows NT. He says NT was the luckiest break OS/2 ever got.

“OS/2 was alone in the field for the longest time. That was a disadvantage,” Stan Levine says. “Now there's another to compare it to, so it can compete to be the best in its field.”

Levine has implemented OS/2 at a list of companies that includes Mobil Oil and General Motors. He says that initially, OS/2 was a really tough sell, up to and even including Version 2.0. Skittish clients thought of it as a server system only, not something for the desktop.

“The reputation was that it had multitasking, multithreading, all these marvelous features, but it still couldn't print,” Levine explains, “whereas Microsoft Windows was something you could just take out of the box and begin happily clicking away with.”

The release of OS/2 Version 2.1 represents a major improvement, he says, one that bridges the needs of two distinct user communities. IS wants reliability and security. End users require ease of use and compatibility. The latest OS/2 marries both, in addition to providing a strong platform for Levine's software development work, building object-oriented client/server applications that are both manageable and user-friendly.

As a business consultant, Levine says he'd like to see OS/2 repositioned as a product that both MIS leaders and end-users can love. He envisions a version that allows for centralized software updating and change propagation across enterprise networks, one that also offers performance and diagnostic capabilities and the network and desktop management power of LAN NetView—all this along with the powerful existing user features such as the Workplace Shell, Windows compatibility, and crash protection.

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"After living forever with weak standards like DOS and Windows, which were never intended to clog our systems for this long, everyone's about ready to accept a grown-up operating system," Levine says.

Multitasking, Multimedia

When Electronic Data Systems's Tim May and Dave Chipman talk about OS/2, they immediately bring up Postal Buddy, a multi-million dollar project that's been in the works for more than two years. Although the U.S. Postal Service abruptly halted distribution of the automated postal kiosk in September, citing its failure to meet revenue projections, the technology has received high praise, says Postal Buddy Corp. executive vice president Marty Goodman.

Billed as "the most advanced multimedia self-service, point-of-sale kiosks in the world," Postal Buddy outlets allow the customer to file a change-of-address notice with the U.S. Postal Service and private publications. It also provides printed address labels, business cards, stationery, postal cards, and more. Twenty-seven peripherals are integrated into the kiosk.

"There were 350,000 customers over a six-month period on nearly 200 machines," Goodman says. "You can do the math. It was widely used."

"We were allowed to evaluate any hardware, software, and operating system we wanted to," says May, an account manager at the giant consultancy. "We went through everything."

This was during the time of Version 1.3 of OS/2; the 32-bit version 2.0 was just a beta version. The EDS team carefully reviewed the beta, along with Unix, DOS, and a beta version of Microsoft's Windows NT. Chipman, EDS's technical director, ultimately decided to gamble on the OS/2 beta. It would run over DigiTalk's beta version of SmallTalk, an object-oriented programming environment that would be used to develop the kiosk applications. He based his selection on the project's high-level requirements, which involved managing laser printers, warm-body sensors, candy machine motors to dispense stamps, a linear actuator for wheelchair access, a credit card/debit card reader, and LEDs to provide instructions to the consumer. The CPU had to control all of this, plus drive a multimedia display.

"As a systems integrator, we have to marry our customer with the best thing out there, whether it's a beta product or what," Chipman says. "All of these requirements demanded that we have a multitasking, multithreading environment."

Fortunately for him, version 2.0 arrived on time, in stable form,

and with development tools available. There were a few minor problems relating to communication ports, but these were resolved in Version 2.1.

With nearly 200 kiosks in operation out of a targeted 10,000, EDS remains happy with its selection. Even today, Chipman says, Windows NT would fail to get the nod because the product, and particularly its multimedia component, has not yet been tested in the industry. That's a gamble, he says, he wouldn't want to take.

"There's an ingrained performance level taught to our public based on the ATM," he says. "This is more complex. However, people still expect to walk up to our machine, get what they want, and walk away." For EDS, that meant OS/2.

Great Flexibility

Mark Tebbe, president of the Chicago-based integrator Lante Corp., has implemented OS/2 for perhaps 50 customers. Tebbe views the OS mainly as a server-oriented product.

"If you're going to put in a PC-based SQL or Notes server, it's the only game in town," he says. The times Tebbe's company has ruled against OS/2 were when the necessary applications—particularly general business applications—just weren't there.

One Lante customer, Hewitt Associates, reports great success with its ongoing migration from DOS to OS/2. An employee compensation firm based in Chicago, Hewitt sells a custom benefits product that uses OS/2-generated screens to present DB2 data retrieved from an MVS host. The program uses a Hewitt-authored RPC (remote procedure call) to communicate with the mainframe, which then runs the SQL query.

"All the data is on the mainframe. OS/2 is there to make pretty pictures," says Chris Soehn, OS/2 systems supporter.

Now Hewitt's own employees, about 3,000 of them, are about to move from DOS to OS/2 as their desktop platform. A nearly completed pilot phase has 150 users running a suite of Windows-based Lotus products under OS/2 2.1. Hewitt plans to migrate to native OS/2 products from Lotus as soon as it feels satisfied with the applications. For now, however, Lotus's Windows versions meet Hewitt's needs for the power and flexibility of a GUI: "Our presentations are critical to us," says Soehn.

Hewitt took part in NT's beta program, but at least for now, such a platform demands greater desktop disk space and speed commitments than Hewitt is willing to muster. OS/2, currently in use mostly as a communications and database manager on about 450 client machines and 20 of the company's 40 servers, works well for this highly integrated company.

SPECIAL REPORT

"The thing I like best about it is its flexibility," Soehn says. "We can take any product, regardless of whether it's intended for the DOS or Windows platform, and get everything to run in some fashion on it."

Towering Migration

Another Lante project involving no less than 4,500 end users was in the works last year. Chicago-based Sears had been, for the most part, mainframe-driven. IS staffers were looking at a number of projects that involved migrations to client/server technology. But approval was tough to get because of the need to justify the cost of the desktop computer installations.

Then Sears embarked on its famous move out of the Sears Tower in Chicago into the neighboring suburb of Hoffman Estates—a perfect opportunity to rethink the way information processing was handled. Sears officials accepted the principle of replacing dumb terminals with networked PCs. The question was, what would run them?

"What drove the OS/2 decision was that it was such a very large user population," recalls John Loranger, the director of end user computing for the giant retailer's merchandise group. "OS/2 was a robust operating system that could handle those numbers of users."

Sears embarked on the OS/2 conversion with the installation of a beta version of 2.0, later replaced by the general release version. As part of the new strategy, IS officials also began to standardize the tool kits on everyone's desk, settling on Lotus's SmartSuite. Once each week from January through September of last year, a new group of 125 users—including many who had never used a PC—was invited to a three-day training class. While they were in training rooms, IS staffers replaced the terminals on their desks with IBM PS/2 PCs. It was a situation ripe for chaos, but as Loranger recalls, "I think most people came back and said, 'Gee, this is pretty easy.'"

"The most difficult change was a cultural one," he continues. "It was far more than an installation of technology. It really was a new way of thinking and doing business."

Pleased with the results, Sears development groups have begun

writing more applications that take advantage of the new configurations. And the company will upgrade to version 2.1 by the end of this year.

But OS/2, while solid, is far from perfect, Tebbe says, pointing to what he sees as a need for major improvements in OS/2's user interface. As a result, as the NT marketplace matures, it will be a 32-bit contender, he says.

Well-designed Interfaces

From his perspective as a programmer analyst for PDA Inc., Chip

Wilson sees OS/2 as a sophisticated product with well-designed application interfaces. That's just the package the Overland Park, Kansas-based software services firm needed to embark on a massive, million-code-line project with Prudential Insurance Co. Thousands of agents across the country are being introduced to OS/2 2.1. In combination with IBM's Communications Manager/2, the platform provides the agents with immediate access to client and market information.

Since many agents are unsophisticated users, PDA wrote navigation programs so they can avoid dealing with the Workplace Shell. Some agents still work off 286s at home. To accommodate them, PDA ported parts of the new system to DOS.

NT wasn't around two years ago when this project started. For PDA's purposes, it still isn't. "Once it stabilizes, there certainly could be a possibility for it," says group manager Randy Bell. "It's about two years behind. There's certainly no reason for us to go back to old technology."

Tried and True

Every time systems integrators recommend and install a product, they stake their reputation on it. That's why their selection of OS/2 tells more about the system than any marketing brochure.

"From what I've seen, when the systems integration people do a major project, they're doing a lot of legacy systems replacement," says Wessner, Input's systems integration manager. "There's a lot of expectation as far as security, backup, and so forth. OS/2 is in the best position to provide that, given its birthright is IBM." ♦

How to Contact the Systems Integrators Mentioned Above:

AMERICAN MANAGEMENT SYSTEMS

1777 North Kent Street
Arlington, Virginia 22209
(703) 841-6000
Fax (703) 841-6704

BSG CONSULTING

11 Greenway Plaza, Suite 900
Houston, Texas 77046-9249
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ELECTRONIC DATA SYSTEMS

5400 Legacy Drive
Plano, Texas 75024
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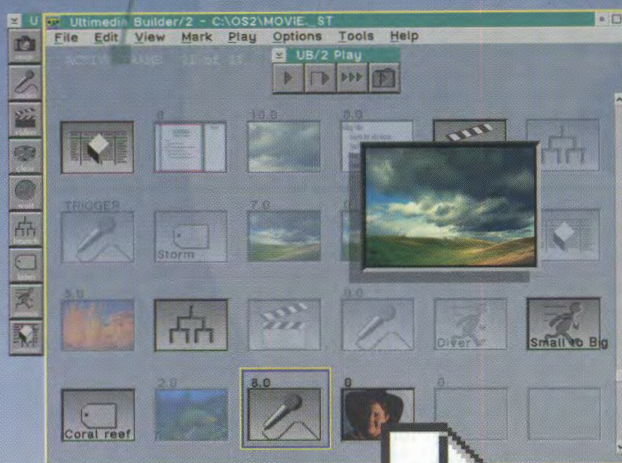
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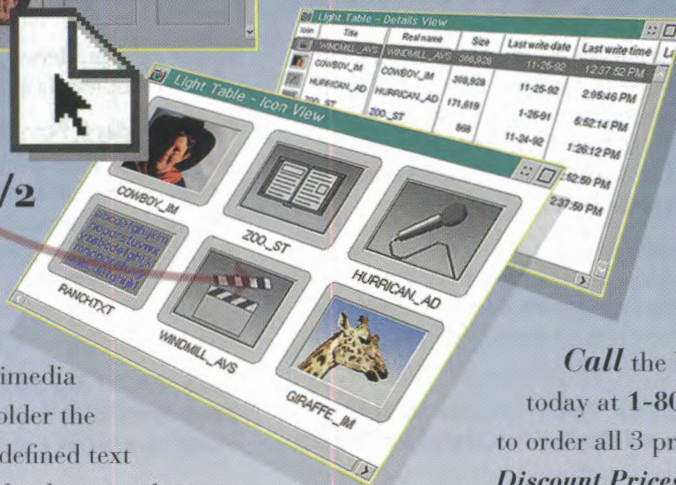
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DOT EXE

Software for OS/2

Putting the Squeeze On

Stacker for OS/2 and DOS

REVIEWED BY KEN MACKIN

The DOS storage architecture is an anachronism, a throwback to the days when just storing data on a 128K floppy seemed exciting. Today's operating systems manage the computer, not just simple input and output, and so include numerous DLLs and large executables. As a result, users are bumping into the data ceiling.

There are two potential solutions to the data glut: keep buying bigger hard drives, or take advantage of compression. If the thought of buying a bigger drive doesn't translate into an empty feeling in your pocket, or a dent in your departmental budget, then read no further. If it does, then Stacker for OS/2 and DOS can help you stave off the budget-shrinking impact of more megabyteage.

Stacker supports both DOS and OS/2, in each case promising to double your FAT hard drive space. Taking Stac at its word, I strove to determine whether or not OS/2 users relying on FAT drives should consider Stacker and if so, what beasts might be lying-in-wait.

In truth, though, with the recent controversy surrounding Microsoft's DoubleSpace utility on MS-DOS 6.0—the program reportedly caused numerous problems for some of those using it—I wasn't exactly excited about loading *any* kind of compression program. I rely on my OS/2 system for all of my office work, so trusting Stacker, as far as I was concerned, meant risking Data Doomsday.

In light of the concerns potential users may have, a more clearly written manual would be welcome. The installation process further heightened my sense of anxiety: You can't install Stacker from within an OS/2 DOS Window. If you try, it simply tells you to use DOS 5.0 and aborts. I spent 20 minutes under various DOS configurations trying to make the Setup program work in OS/2. As it turns out, the error message is misleading. Rather than dig-

ging up a copy of DOS 5.0, all you really need to do is boot your system from Stacker Disk 1 to get the two-diskette Setup program running.

Once Setup is running, it offers you both **Express** and **Custom** installation options *à la* Windows. As you might surmise, I am too paranoid to let an install program compress my data into some digital black hole, so I chose **Custom**. Among other things, **Custom** lists the available partitions and lets you select the partitions to compress.

My boot partition was listed as unstackable—I use HPFS. (For the record, HPFS functions flawlessly and provides much better performance than you could ever get with FAT.) Many potential users may reject Stacker out of hand simply because it will not compress HPFS partitions. Since my boot drive was out of contention, I compressed my second physical drive, which is a FAT-formatted 384MB IDE.

Before loading Stacker, it was 66 percent filled with Windows, DOS, and sundry data files. Stacker munched and crunched the data from 253MB down to

146MB—58 percent of its original size. The data was fully digested in about 14 minutes, time enough for compression, verification, and re-verification.

Stacker, like Microsoft's DoubleSpace, keeps the original drive (D: in this case) visible, and creates a logical drive (E:) where you access the compressed data. This would be extremely inconvenient if all of your application objects were tuned to a particular volume as mine were. Stacker works around the problem with a SWAP program that loads at boot time—it switches the drive letters so that path-sensitive applications see the drive letter they expect.

Stacker does a few other things that make it a sensible and



usable program. I use the Boot Manager and can run DOS 5.0 and Windows 3.1 from a 70MB DOS partition on my first physical drive. Stacker allows you to access any compressed DOS partition from either OS/2 or DOS—whichever you need. This is great for me because I have a few Windows programs that will not run from OS/2. Fortunately, with Stacker running drive E: appears the same regardless of whether I select DOS 5.0 or OS2/HPFS from the Boot Manager menu.

Stacker also supports dual boot configurations and includes a CONFIG.SYS file rebuilder and a CREATE utility for Stacking floppy drives. A few DOS-like utilities for substituting drive

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LIST PRICE: Stacker: \$139.95; upgrade from Stacker for DOS, \$99.95

letters, changing attributes, and REMOVEDRV (for dumping Stacker from your system) round out the package.

While Stacker did not “double my disk capacity,” I did see a 75 percent increase. Your effective compression ratio will vary according to the type of data on your disk. Stacker has little effect on already compressed files (such as .ZIP files). Database files, on the other hand, may compress much more than the claimed average of 2:1 (the technical specifications list a maximum compression ratio of 16:1).

Now, having been Stacked, I have more available space and less fear of using compressed drives. If only Stacker supported HPFS, had a better manual, and was able to run the install under OS/2's DOS mode, I would have been really happy with it. In any case, Stacker for OS/2 and DOS seems to be a robust and capable program for getting more data into less disk space. ♦

The Citrix Application Server

REVIEWED BY WAYNE RASH JR.

Citrix's application server, WinView for Networks, is an OS/2-based system that promises to improve performance for network-based and remote users by off-loading some processing requirements. For network users, this means compute-intensive tasks can be run on the application processor, freeing workstations for more routine uses. For remote users, the Citrix application processor promises to make the most of limited bandwidth by performing computing on the application processor and sending only screen, keyboard, and mouse information across the communications path.

In offering these capabilities, WinView for Networks joins an already crowded marketplace. The ability to off-load some computing requirements to a remote processor is part of the attraction of SQL database servers. Likewise, image servers or CD-ROM servers offer some of the same features. Where this Citrix server is different is that it will work with most OS/2 as well as MS-DOS and Windows applications—not just database engines.

In the case of remote access, Citrix promises much the same functionality as remote operation packages such as Microcom's

Carbon Copy or Novell's Access Server. But Citrix is an OS/2-based multi-user system that its maker claims will outperform its DOS-based competition, provides better security and data integrity than DOS-based application servers, and offers the only remote access solution for OS/2.

Inside Citrix

The product has three parts: the server itself (an OS/2 process), a Windows interface, and a NetWare interface. Citrix ships with its server a modified copy of OS/2 2.0, which the install process will use to overwrite whatever operating system you might have, including later versions of OS/2. The Windows interface is a modified version of Microsoft Windows 3.1 that supports remote connectivity.

Novell NetWare connectivity includes support for IPX and SPX communications, as well as support for the NetWare OS/2 Requester. This means that remote users can use the connectivity provided by Citrix to log in to their Novell networks.

Citrix provides remote connectivity through the use of smart multiport asynchronous communications cards. For this review, Digi International, Inc., of Eden Prairie, Minnesota, provided a

DOT EXE

Digiboard PC/Xem 16-port asynchronous communications board. Citrix can support the dial-in users through the Digiboard, network users through the network connection, as well as a user on the system console itself. Citrix says the company has done a number of modifications to the process schedulers in OS/2 and Windows to allow this level of access on a single processor system.

The Test Environment

We tested Citrix on a Novell NetWare 3.11 Ethernet LAN. The Citrix application server resided on a Unisys PW2 486/25 platform with 16MB of RAM. The Digiboard PC/Xem was located on this platform. We also used a Gateway 2000 4DX2-66V 486/66 machine with local bus video. Both machines had an ISA bus and both used Intel EtherExpress 16 Ethernet cards.

The LAN workstations included a variety of AT-compatible computers running MS-DOS versions 5.0 and 6.0. We attempted dial-up access with three different notebook computers running MS-DOS 5.0. For reference, we also dialed into a test system located at Citrix headquarters in Florida.

The Installation

Imagine what it must be like to install OS/2, Windows, Procomm, and NetWare at the same time, and you'll have an idea of what installing Citrix is like. It takes a while, and you have to answer many technical questions. Unfortunately, it also doesn't do everything it should do to make Citrix run.

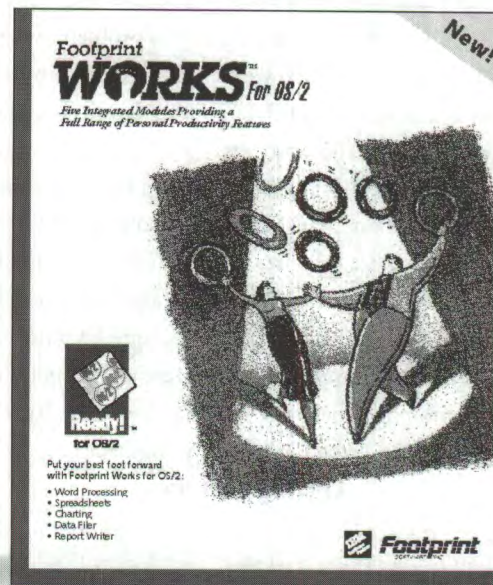
The most important problem with installation of Citrix is that neither the manual nor the install program itself mentions the significant performance penalty that results from trying to use Citrix on a FAT file system. We were able to improve performance on Citrix by more than an order of magnitude by simply changing to OS/2's HPFS. The Citrix manuals made no mention of this, and in fact seemed to urge users to stay with the FAT file system so that they could use existing programs already on the disk. In actuality, the only acceptable approach with Citrix is to back up any existing files you might want to have available later, and reformat the Citrix server with HPFS.

Other than a problem with some missing statements in configuration files—for example, using the install program as delivered you will miss a cache control statement for the OS/2 CONFIG.SYS file that is required for best performance on ISA systems, and the installation for the Intel Ethernet cards misses a critical statement that sets the Ethernet frame type to 802.3—Citrix handles what could be a daunting installation well. All the installer has to do is sit back and insert the 19 3.5-inch disks when

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told. The process is tedious, but few things are left to chance.

Installation was made more difficult by the sparse coverage of the process in the manuals. Adding to this problem was the customer support process, which we found to be both inept and on occasion unavailable. With this product, plan on being on your own during the installation process.

In reality, though, most Citrix users will have the product installed by a systems integrator who will also provide the first line of support. The Citrix support staff, while it didn't handle all of the problems, was able to handle many of the more routine problems, such as configuring workstations, quickly and properly. With the help of the support staff we were able to get one application server running, albeit very slowly and without asynchronous support, prior to the arrival of a factory engineer to help us out.

Using Citrix

Once you get it installed and running, this product is fairly easy to use. You log into the server by running the workstation software and telling it which Citrix server you want to connect to. Once you choose and are connected, you are asked to log in with your user name and password, in much the same way you do with NetWare. At that point, you're offered a Task Selector menu, which in turn leads to a Start Programs menu. That menu gives you access to the OS/2 and MS-DOS prompts, and it can run programs that the system administrator has added to the system.

The only difference between accessing Citrix across a network and through a dial-up connection is that the workstation software for the dial-up connection dials through the modem for the connection. Performance using a 14,400 bps V.42 modem seems to be about the same as performance across the network. Both are slower than running a native MS-DOS session, but neither is objectionably slow.

Once you have access to a system prompt or a program, you can get back to the Task Selector by pressing <CTRL><ESC> just as you do in Windows. Because this can cause a conflict with Windows, you can also change the key combinations that Citrix will use. The system administrator makes these changes and others involving user setup, security, and other configuration options through a Start Programs menu that's similar to the one available to users, but with more choices. The access procedure is the same for both.

One important advantage to the Citrix server is that a user can invoke more than one session. A user might, for example, start an accounting program running in a DOS session, and then switch to an OS/2 or Windows session, or another DOS session to do some other task. Users can switch at will between sessions, and

can disconnect from the server completely while tasks execute—an important consideration for dial-up users who might otherwise be stuck for long periods of time watching applications run over long distance telephone lines. This capability adds a great deal to the flexibility of Citrix as both an application and remote access server.

Problems

One of the most serious problems we found was that the server has a significant amount of trouble dealing with the FAT file system. While the installation guide says that you can install on this MS-DOS file format, you should avoid it.

The product as originally installed turned in some of the slowest benchmarks we've ever recorded. The factory engineer that assisted with the installation said that a bug was at least partly responsible for the fact that the server software was running as slowly as it was—roughly one tenth the speed at which it should run. This, and its failure to recognize the presence of the Digiboard, was cured by reformatting the server for the HPFS file system.

An application running in a session on the Citrix server will perform at about one half the speed of the same application running on the same machine under DOS. Considering the overhead required to monitor communications, provide security, and to support a multi-user multitasking environment, this is certainly acceptable performance.

At the suggestion of Citrix, we attempted some performance tuning on the Unisys machine. The performance tuning may be helpful for some, but in our case it resulted in no significant change in performance at all. One thing the performance tuning did illustrate, however, was the product's weak error-handling.

When Citrix encounters an error during installation, loading, or operation, its typical response is simply to stop working. Error messages, when they appear, are usually cryptic. For example, when we were testing the dial-up connection to the Citrix server, we lost the modem carrier on one occasion. Rather than simply announce that it had lost the connection, Citrix displayed a Windows error message that said the packets had arrived out of sync. Even the factory engineer on site at the time took a while to figure out what that meant.

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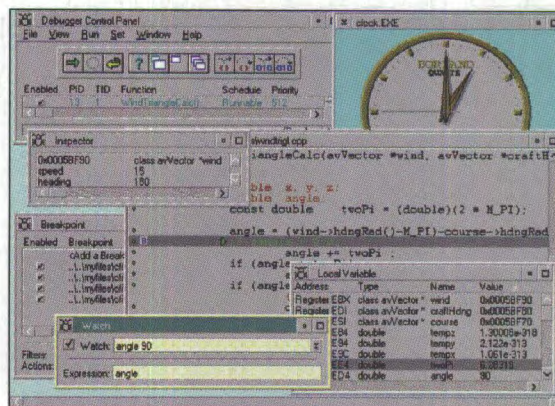
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The system frequently came to a stop during the boot-up process of loading drivers. To get it going again required rebooting—a very slow process—and sometimes restarting from floppy disks—an even slower process. Unlike OS/2, which will allow you to drop out of the boot process if the CONFIG.SYS file is corrupted or set up wrong, Citrix will not. As a result, we spent hours waiting for floppy disks to load so that we could fix one problem or another with the way Citrix had configured itself on installation.

Citrix officials say the company plans to fix both the obscure and missing error messages, and the problems with the boot process.

Once the product was installed, we encountered the final series of problems—difficulties running the video and disk sections of our benchmarks. Video problems cropped up only when accessing Citrix from a remote workstation, such as one that's attached through the LAN. The disk benchmarks were prevented from operating by the Citrix security system, which prevents low-level write access to the hard disk. This helps prevent viruses from working, but it caused the server to crash to the point it needed to be rebooted.

One way the company suggests using the application server is to invoke the workstation software (called WINLAN) from

within Windows. This will allow you to fire off an application on Citrix, and then return to whatever you were doing on your own workstation. We found, unfortunately, that while we could normally switch between the Windows session on the local workstation and the session (Windows or otherwise) on the Citrix server, part of the time the session on the Citrix server would fail to accept remote input. You then must terminate your remote session and reconnect. Because the server can maintain your remote session and return you to where you were when you left, this was more of an irritation than anything else, but it happened frequently enough to be an irritation indeed.

Conclusions

For remote access, it's hard to beat Citrix for performance and flexibility, once you get it running. Likewise, if your business has a number of large, slow operations that are vital but tend to hurt productivity when used across a LAN or a WAN, off-loading applications to a Citrix server could be very useful. Getting Citrix running can be tricky, though. Still, for businesses that require the unique capabilities that Citrix delivers, it's a useful product indeed. Just make sure you know where your support is going to come from before you start, and know exactly what you plan to do with it before you buy. As useful as Citrix might be, getting there may not be a trivial task for you. ♦

GammaTech, Version 2.1

32-bit utilities for OS/2 Version 2.x

REVIEWED BY HERB TYSON

Let's get the first question out of the way right now: The GammaTech Utilities is a series of 21 32-bit programs intended to help you work more effectively and efficiently with OS/2. The tools cover a diverse range of system management tasks, and are similar to those found in DOS-based packages such as the Norton Utilities.

Among the utilities are programs that will allow you to test your drives for defects, flag bad sectors, delete files or directories, recover damaged files, defragment FAT and HPFS volumes, undelete files easily, as well as a number of others.

Installing GammaTech is simple and painless—simply click on INSTALL.EXE from a Drive object, or open an OS/2 command prompt session and type A:INSTALL. The installation

program creates a GammaTech folder, and asks for permission before changing CONFIG.SYS. Furthermore, you may override the default installation directory.

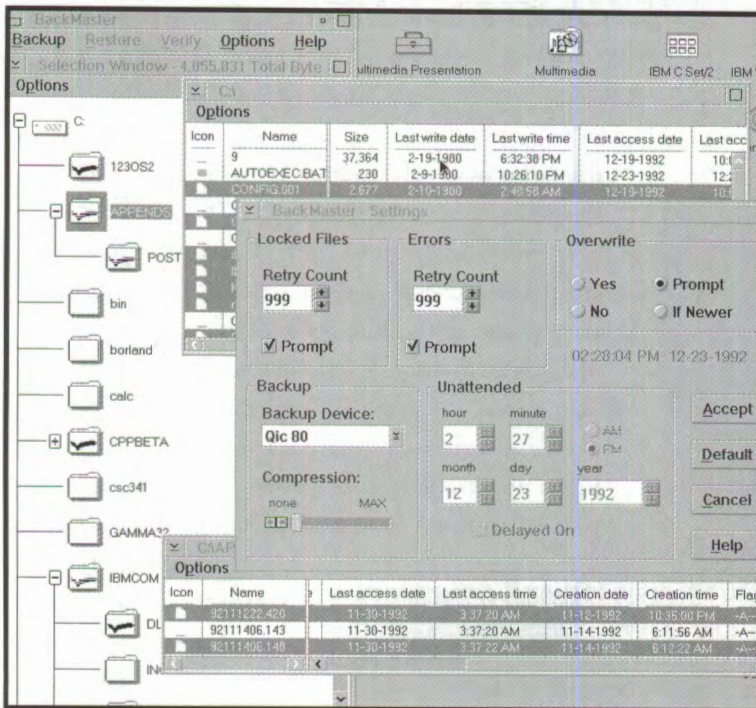
Inside the GammaTech folder you will find GAMMA.INF (a VIEW-able hypertext information file on all of the utilities), eight PM utilities, and two text-mode utilities (see the Table on page 59 for a list of the programs and their descriptions). You run the remaining 11 utilities from the command line.

Using the GammaTech Utilities

With few exceptions, the GammaTech utilities follow intuitive conventions. Consider the HPFS Optimization program: It's pretty clear that you select the drives and then click on the **Optimize** button. Less obvious, however, is that you may analyze the

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fragmentation (without defragging the entire drive) by checking the **Display Only** box before clicking **Optimize**. If you do, you'll be able to see what would happen if you were to turn off the **Display Only** option.

(This approach to user interface design creates a rather disconcerting effect when used with the Attributes and Delete programs. When you select **Display Only**, messages like *Erasing TAX-RECORDS.DOC* flash by even though the files remain intact.)

In addition to the few oddities, you will find many convenient features built into the user interface. Veteran OS/2 users will welcome two particularly useful items. First, you can close any of the PM programs using the F3 key—as per the OS/2 Version 1.x standard. You'll find vestiges of this rapidly dying convention in DeScribe, E, EPM, PMComm, Golden Comm-Pass, and a few other long-time OS/2 players, but many of the newer PM arrivals shun this technique. Second, the command syntax can be obtained for each of the command line utilities by including `/?`—a technique familiar to many DOS users.

Performance

Without a competitive OS/2 package on the market, it's difficult to characterize GammaTech's performance. However, all operations seemed to perform quickly and flawlessly. The HPFS Optimize program required less than five minutes to optimize a high-traffic 150MB volume. It defragged the entire drive while other programs continued to run. Rather than locking the entire drive, the defragger works by opening one file at a time. If another program is using a file, Optimize simply skips that file and moves on. Along the way, GammaTech's help system provides clear directions about what to do and what it all means.

A key feature for OS/2 users is the Undelete capability. While

OS/2 does provide an undelete facility, it uses extra disk space, is awkward to use, and hampers performance. When OS/2's native undelete feature is enabled, "deleted" files are moved to a DELETE directory that's limited to a preset amount of disk space. Servicing the delete directory requires moving files and checking the space consumed. The result is painfully slow performance, especially when deleting a large number of small files.

In contrast, GammaTech obtains information about deleted files from the file system itself (the operation is similar to DOS 5's undelete). Thus, GammaTech's Undelete feature doesn't incur a performance penalty, and it doesn't require extra disk space.

Of course, this approach has a disadvantage as well: If you wait too long, files may be overwritten before you realize they've been deleted. In practice, however,

GammaTech tends to provide at least the same level of undelete insurance as OS/2's built-in approach, without sacrificing disk space and performance.

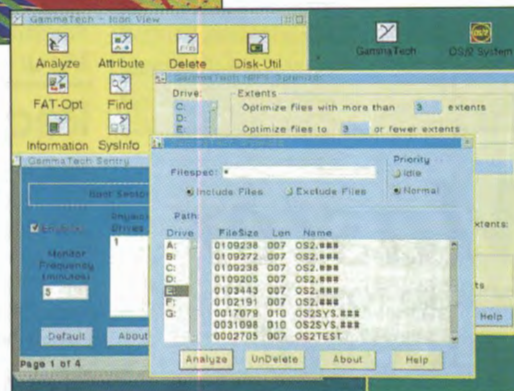
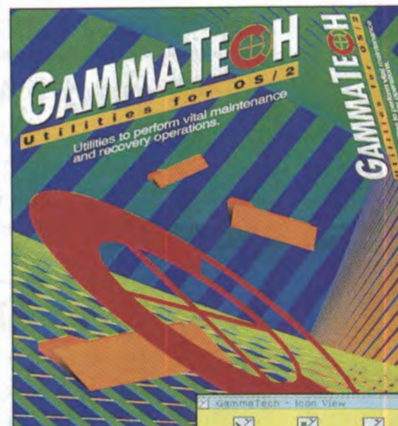
It Would Be Nice If...

For many users, OS/2's Drive Object approach doesn't provide suffi-

cient flexibility. The Drive Objects are sufficient for managing files one folder at a time, but they falter at some disk-wide management tasks. For example, OS/2 doesn't provide a good native file manager for listing all files matching *.BAK or *.TMP. OS/2's PMSeek tries, but it doesn't quite succeed. PMFile in OS/2 version 1.x came much closer.

With a bit of extra effort, GammaTech could fill the file-management gap. At present, however, it provides partial solutions coming from two different directions. The Delete utility gives you all-or-nothing deletion for files matching your criteria. Preferably, it would include an option to find the files and then allow selective deletion from the list. The Find utility, on the other hand, allows such selective viewing, but it does not provide options to delete, copy, move, rename, or otherwise manage files.

Rather than including these features in separate tools, a single integrated utility would be a great improvement. Thus far, none



GammaTech Utilities

Sof Touch Systems, Inc.
1300 South Meridian,
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Oklahoma City, OK 73108
Voice: (405) 947-8080
Fax: (405) 632-6537

LIST PRICE:
GammaTech Utilities
Version 2.1: \$149

DOT EXE

of the various third-party and shareware vendors have quite risen to the task. Perhaps GammaTech can be enticed to provide the kind of file management missing from OS/2 2.1 (unless OS/2 2.2 or somebody else beats the company to it).

Nonetheless, GammaTech provides some nearly essential features missing from OS/2 2.1. The price seems a bit steep, however. At \$149, it costs more than most users paid for OS/2 2.1 (and is high enough that most corporate purchasers will require preapproval). Nevertheless, if you ever blow away a file and

can't get it back by using OS/2's built-in UNDELETE, or if you ever lose a large data file because a single disk sector has become corrupted, GammaTech could pay for itself the first time out. If you're a consultant, OS/2 system administrator, or even a system-savvy user, the GammaTech Utilities should definitely be in your tool bag. ♦

Herb Tyson is a computer industry analyst and consultant. He is the author of several books, including Your OS/2 2.1 Consultant, 10 Minute Guide to OS/2 2.1, and the Word for Windows 6 Super Book.

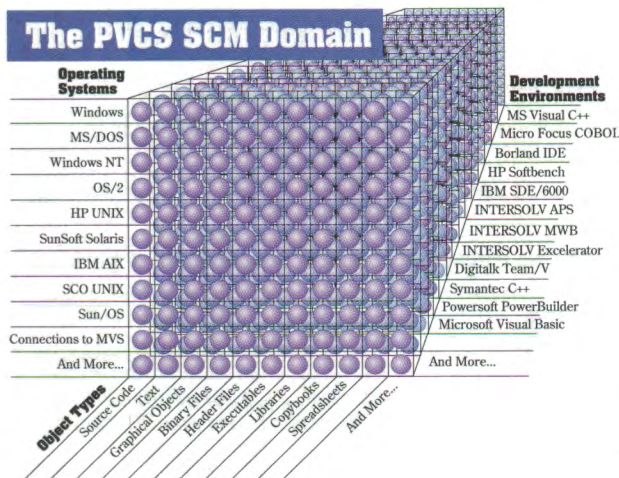
The GammaTech Utilities

UTILITY	TYPE	PURPOSE
ANALYZE.EXE.....	PM	Tests drives and displays information.
ATTR.EXE	PM	Change file attributes (hidden, read-only, system, archive, times, and dates)
BADSECTR.EXE.....	Text	Marks bad sectors on a disk to prevent further use by the operating system.
BEEP.EXE.....	Text	Sounds "beeps" from the PC speaker in any frequency and duration you specify (frequency and duration may be stored in a file for playback).
DELETE.EXE.....	PM	Deletes and "wipes" (overwrites with nulls) files from your disk, selecting by file specification, size, dates, and times.
DELTREE.EXE	Text	Deletes entire directories, including files and subdirectories.
FATOPT.EXE	Text.....	Analyzes and optimizes FAT (File Allocation Table) drives (including floppies!) to eliminate file fragmentation.
FATSORT.EXE.....	Text	Selectively sorts subdirectories on FAT volumes, by name, extension, date/time, and file size.
FILEJOIN.EXE.....	Text	Re-joins a GammaTech-recovered file that spans several diskettes into a single hard disk file.
FILEREC.EXE	Text	Recovers a file with damaged sectors.
FIND.EXE.....	PM	Searches for files based on name, extension, size, dates, times, comments, and text.
GTDISK.EXE.....	Text	A text-based shell for undelete, file recovery, partition repair, boot sector backup and restore, "dirty" flag setting, and sector editing when PM is not available (GTDisk can be run from the GammaTech installation diskette).
HPFSOPT.EXE	Text	Command line program to analyze and optimize HPFS volumes to minimize file fragmentation.
LD.EXE	Text	List Directory utility that acts as an enhanced DIR command. In addition to a wide variety of display options, the LD command lets you display and set file comments, which are maintained as standard OS/2 Extended Attributes.
MKPATH.EXE.....	Text	Creates a multi-level path in one step, creating all necessary subdirectories to establish the path (e.g., MKPATH G:\PROGRAMS\OBJ\DATA).
OPTIMIZE.EXE	PM	PM program to analyze and optimize (defragment) HPFS volumes.
REBOOT.EXE	Text	Reboots the system (functional equivalent of the OS/2 command SETBOOT /B, which is similar in effect to pressing Ctrl+Alt+Delete).
SENTRY.EXE.....	PM	Monitors the boot sector to prevent changes by accident or by a virus. Also locks drives or files against modification and backs up system .INI files.
SYSINFO.EXE.....	PM	Provides complete information on your system and hardware (disk, video, devices, ports, etc.).
UNDELETE.EXE	PM	Undeletes FAT and HPFS files without using OS/2's DELETE directory approach.
WHERE.EXE.....	Text	Command-line file search utility to locate files based on file specification, times, dates, comments, or text within the file.



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Novell's NetWare Comes to OS/2

BY WAYNE RASH JR.

For the first time since the introduction of NetWare 386, now known as NetWare 3.12, Novell is offering a non-dedicated version of its top-selling network operating system. NetWare for OS/2 is designed to share a hardware platform with OS/2 2.1, using some of the operating system's input/output services, such as interrupt servicing, and its disk operations. As a result, users can have a single computer that acts as both a NetWare file server and an OS/2 platform.

Unlike other OS/2-based network operating systems, however, NetWare for OS/2 does not exist as a task within the OS/2 environment. Instead, NetWare is a parallel operating system that shares the processor with OS/2 on an equal basis. In fact, NetWare for OS/2 doesn't even make use of the OS/2 file system; the installation process requires that it be installed on a separate disk partition.

This method of sharing resources between NetWare and OS/2 has both advantages and disadvantages. On the one hand, you can use the same equipment to support both NetWare and LAN Server on the same machine at the same time—a real resource saver for organizations that are short of hardware. On the other hand, any machine that must support two independent network operating systems will pay a performance cost.

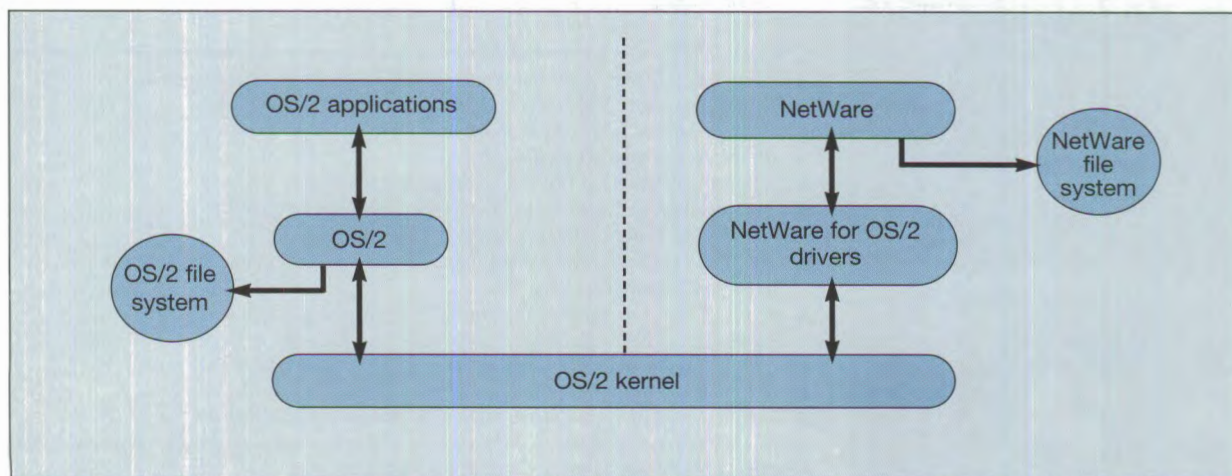
The magnitude of that cost depends on the relative level of use and any overhead required by the two systems.

In addition, NetWare functions much as it would on a completely separate computer. Despite the fact that both NetWare and OS/2 are sharing the same machine, the NetWare requester must be installed on that machine—just as it must be on any other OS/2 workstation on a NetWare LAN—if it is to communicate with NetWare. This adds slightly to the complexity of operating NetWare for OS/2, and to installing it as well.

Installing NetWare for OS/2

NetWare for OS/2 consists of two OS/2-specific diskettes, a CD-ROM containing NetWare 4.01, a license diskette, and a registration diskette. In addition, you may need driver diskettes for your specific network interface card, your disk controller, or other installed equipment. A floppy disk version of NetWare is available from Novell, but the company discourages its use. With good reason: According to Novell spokesman Blaine Homer, the full version of NetWare 4.01 consists of more than 250 diskettes and requires more than 18 hours to install.

The NetWare for OS/2 installation process requires three steps. The first is disk preparation, in which you must prepare separate partitions or drives for OS/2 and for NetWare. Nor-



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CONNECTIVITY

mally, this requires that you decide how much space to give each operating system, and then create disk partitions that meet those requirements. This means that you will need to format your hard disk specifically for this installation, so you won't be able to use an existing OS/2 drive and have it remain intact. As a result, there's no advantage to ordering OS/2 preloaded since you'll have to remove it anyway.

One quick and easy way to partition your disk, and the one we used, is to use the FDISK utility available on an MS-DOS installation diskette. The process is a simple one of removing the existing partition, if any, and then creating two new partitions. Once the disk is re-partitioned you can remove the DOS diskette, reboot the machine, and let OS/2 take over the installation. You will need to tell OS/2 to use the existing Drive C: when it formats the disk with either the HPFS or FAT file system.

After completing the OS/2 installation, you can install the Novell NetWare Requester for OS/2. This step is required if you plan to have the OS/2 on the machine you're installing communicate with NetWare.

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Installing the two floppy diskettes for NetWare for OS/2 takes a few minutes and prepares OS/2 to accept NetWare 4.01 as a parallel operating system. In addition, this installation adds network management applications so you can manage your network from the OS/2 workstation that's being shared with NetWare.

Installing NetWare itself is the most difficult and time-consuming step. This is partly due to the sheer volume of data and partly due to inadequacies in documentation and problems with OS/2. The only major problem appears when you invoke the INSTALL program on the CD-ROM. This program resides in the subdirectory dedicated to the language you select to use with NetWare (we used English), and the manual instructs you to type the word "INSTALL" to begin the process.

Unfortunately, OS/2 then executes the first program named "INSTALL" that it finds, and this is the one for MS-DOS. Because the MS-DOS installation program won't work properly under OS/2, it crashes, and the installation fails in a series of cryptic messages. What works is to type "INSTALL.CMD" so that OS/2 invokes the proper program. Novell product manager Heather Stone told *OS/2 Professional* that the company is already testing new installation software that will eliminate this problem.

Once the installation program has launched successfully, it installs some additional software into the OS/2 portion of the disk. It then begins initializing the NetWare partition and copying software into it. This isn't a package you can launch and forget, however. The NetWare installation program occasionally stops to ask a question, request a driver from a floppy disk, or request operator input before it goes back to copying software.

The actual duration of the installation process depends more on the speed of your CD-ROM than on anything else. Plan on spending a couple of hours to install the complete copy of NetWare, including the on-line documentation and the computer-based training. Most of this time requires no operator activity, although the operator must be on hand to answer questions. Novell says it is also planning to rectify this by changing the installation program to request all needed information at the beginning so that installation can proceed without further attention from the operator.

Once the process is completed, the server's console screen appears as an OS/2 command line application. You can switch into it by clicking on the Command Line icon and switch back to OS/2 by pressing the <CTRL><ESC> keys. Within NetWare for OS/2 itself you'll find the familiar NetWare monitor screen,



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CONNECTIVITY

as well as the other NLMs (NetWare Loadable Modules) that are available in the stand-alone version of NetWare 4.01.

Using NetWare for OS/2

One of the reasons that NetWare for OS/2 looks so much like the stand-alone version of the same product is that it is nearly identical. The CD-ROM you use to install NetWare for OS/2 is the same one used to install the stand-alone version. The only differences between the two products are found on the two diskettes installed at the beginning, and those really only control how NetWare interacts with OS/2. Users won't notice any difference at all because from their viewpoint no difference exists.

This conformity between NetWare for OS/2 and stand-alone NetWare 4.01 is important to both administrators and users. It means that different platforms can be used within a company without requiring changes in the way people are trained. Likewise, because they are essentially the same product, other applications designed to work with NetWare 4.01 will work with NetWare for OS/2.

Users also won't see much difference at first if they're chang-

ing over from earlier versions of NetWare, although the differences are there, and they're important. NetWare for OS/2 does away with the NetWare Bindery, for example. The Bindery was a flat-file database used to store user names, security levels, and passwords. It turned out to be a security problem for Novell; in the new version it has been replaced by NetWare Directory Services.

NetWare Directory Services, among other things, manage user security in NetWare. In addition, they provide a domain-oriented view of an enterprise network. This means that NetWare 4.01 (and NetWare for OS/2) will allow you to use a variety of services on many servers transparently. Whereas once users had to log on to each server individually, if they planned to use more than one, now only one log-on is required.

Should You Use NetWare for OS/2?

Novell has succeeded in creating a network operating system that will share a platform with OS/2. If your organization is short of hardware and getting new hardware is difficult, then this is a product to consider. We found it to work well and reliably, and once we got past the installation difficulty, easy to install and use.

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CONNECTIVITY

There is, however, always a question of whether non-dedicated servers are a good idea. Because they usually are placed into the hands of users, they are subject to being taken down without warning, to the frustration of network managers everywhere. On the other hand, this option offers a good way to combine a network file server with a management workstation so that the only user will be the network administrator. This can save the company a few dollars and possibly make life a bit simpler for the administrator.

One other feature that may incline some administrators to consider this option is that NetWare for OS/2 comes with some graphical management utilities that are much easier to use than older command-line based programs.

In bottom-line terms, this is an excellent way to have your NetWare 4.01, your OS/2 management workstation, and maybe even another network OS, all in one box. Your accounting office will love you. ♦

Why NetWare for OS/2?

Why, we asked Jeffrey L. Turner, did Novell decide to create NetWare for OS/2? "Customer demand," was his answer.

Turner, a Novell product line manager at the company's Provo, Utah, headquarters, said that NetWare for OS/2 is already getting a "very warm" reception, especially in some market segments such as the banking community.

Novell thinks that NetWare for OS/2 is exactly right for the branch office environment, a work site where 12 to 15 people may have to share a network, while at the same time communicating with an IBM mainframe or needing access to an application server. In an environment such as this, the NetWare server and an OS/2-based communications server could exist on the same machine. Likewise, the server could support a SQL database manager, either on OS/2 or on NetWare. "This allows them to leverage their hardware investment," Turner explains.

Reading between the lines, Novell apparently sees other IBM sites as well as OS/2 users moving to NetWare for OS/2. Turner noted that he expects the stand-alone version of NetWare 4.01 to be the more popular version of the networking software, but NetWare for OS/2 is already, and increasingly, a popular product. ♦

The Review Environment

Reviewing a product such as NetWare for OS/2 requires an extraordinary test environment. While the product is capable of running on any OS/2-compatible computer with 16MB of memory and 150MB of hard disk space, we wanted to look at this product in the sort of environment that most companies would typically use. As a result, we tried two different computers. At the low end, we used a Unisys PW2 486/25 with 16MB and 150MB of hard disk. It's unlikely that any company would choose a computer with less horsepower than this, and if it did, it'd be disappointed. At the high end, we installed NetWare for OS/2 on Zenith Data Systems' impressive Z-Server EX Model 450.

While the Unisys server worked adequately, it's the Z-Server's performance that may convince you there is no performance penalty from a non-dedicated server. The Z-Server is designed to be a server rather than a workstation, and that approach is obvious throughout the computer. The hard disk bays, for example, are on the bottom of the computer, oriented so that they face sideways. This keeps SCSI cable runs short and reduces clutter, while at the same time making drive replacement a cinch. The computer was delivered with a single 550 megabyte fast SCSI-2 drive, and had room for seven more.

There's more than just room for disk drives. The Zenith features ten EISA bus master slots for lots of expansion, it will support a full range of floppy drives, CD-ROM and tape drives, and it has a whopping 384-watt power supply. The unit we used to test NetWare for OS/2 had an Intel 80486 DX 50 processor and 32 megabytes of memory. The Z-Server will support up to 128MB of memory on the motherboard, and up to 384MB of memory using an optional expansion board.

Preliminary tests suggest that this may be the fastest OS/2 machine we've ever tested. Zenith has since upgraded this machine with a Pentium processor, and we're starting more thorough tests for a full review in a future issue.

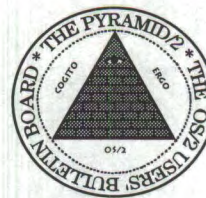
The OS/2-certified Z-Server EX Model 450 DE sells for \$6,599.00. Contact Zenith Data Systems, 2150 East Lake Cook Road, Buffalo Grove, IL 60089. For more information, call 800-553-0331. ♦

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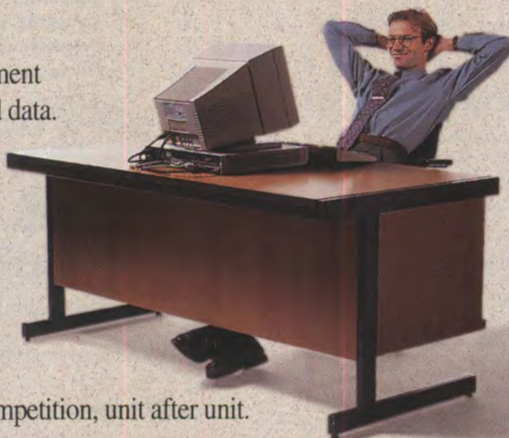
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Circle #174

SCOOPS

Ferengi has arrived

A mere 20 minutes after OS/2 2.1 for Windows (aka Ferengi) was delivered to Minneapolis, Minnesota, area Egghead stores, *OS/2 Professional* became the first buyer of this new OS/2 variant in the Twin Cities. Due to press schedules, the short lead time left little leeway for exhaustive testing, but we did notice a few interesting items.

OS/2 for Windows is essentially a version of OS/2 2.1 that does not include WIN-OS/2 (the custom-tailored variant of Windows 3.1 for OS/2 2.1). Instead, the system uses an existing copy of Microsoft Windows 3.1 that resides on the target machine.

As a result, installation requires six fewer diskettes (notably, the same number of diskettes used by Windows itself).

Oddly, installation time runs up to 20 minutes longer than OS/2 2.1 despite fewer disks. Nevertheless, users who plan to Dual Boot between OS/2 and DOS will save disk space and configuration time when adding new Windows applications to their systems (unlike WIN-OS/2, a program installed in OS/2 for Windows will be available in DOS/Windows and vice versa). As such, Windows for OS/2 is best suited for machines that run primarily Windows applications.

Surprisingly, our initial tests show that Windows applications run faster on OS/2 for Windows than with WIN-OS/2. Most applications gain a slight performance edge under native Windows 3.1, although one notable exception, a complex CorelDRAW document, ran more than twice as fast with OS/2 for Windows. Corel president Michael Cowpland recently told *OS/2 Week* that CorelDRAW can run 12 percent faster in Ferengi.

We've also run into a few quirks. The Windows session will not exit properly on another system (but will close from the Task List). Secondly,

although our systems used Super-VGA Windows 3.11 drivers, Windows for OS/2 configured all test systems with VGA-resolution, thus creating an odd-looking initial screen (the high resolution configuration remains intact when switching back to DOS). Also, Ferengi still exhibits some of the odd behaviors of OS/2 itself, such as overlapping shutdown message windows.

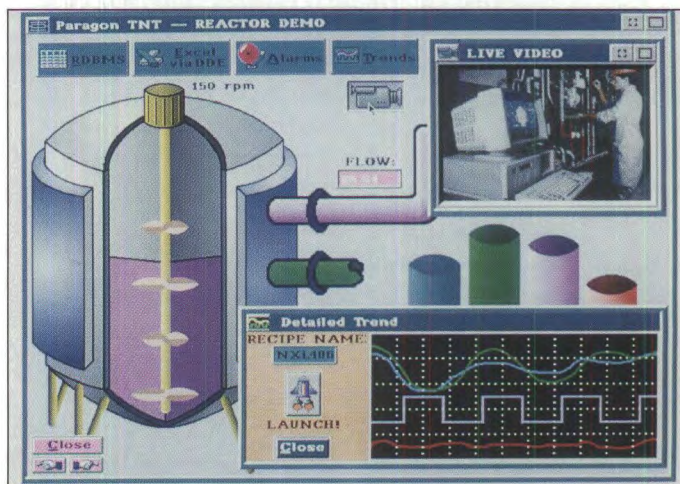
All things considered, if you run mostly Windows apps, OS/2 for Windows just might be a better OS/2 than OS/2. For OS/2 and DOS shops, standard OS/2 2.1 may still be the best option.

New Products

OS/2 on the shop floor

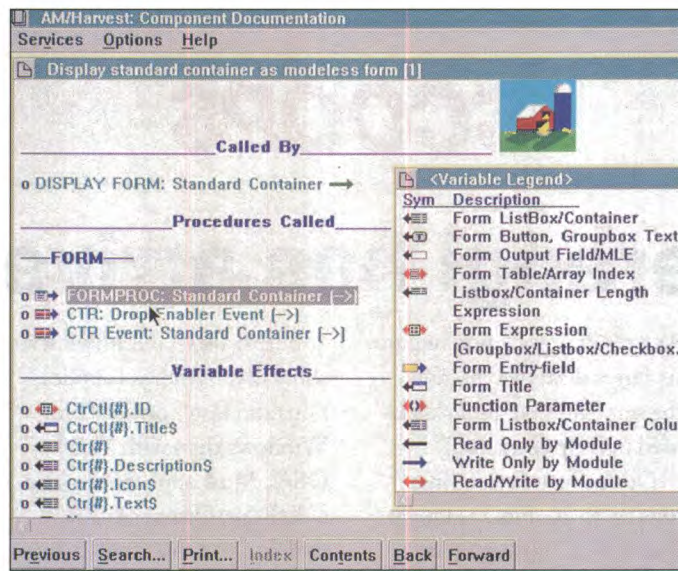
Intec Controls Corp. is entering the OS/2 market with a new family of factory monitor and control products collectively known as Paragon TNT. The client/server modules, including a man-machine interface, an operator interface client machine, and a continuous strategy server, can be configured to specific

needs. Since the modules are portable, the ease of use is enhanced as a company changes shape and direction. Paragon TNT ranges in price from \$1,500 to \$15,000 depending on the configuration. Intec Controls Corporation, 55 West Street, Walpole, MA 02081, (508) 660-1221, fax (508) 660-2374.



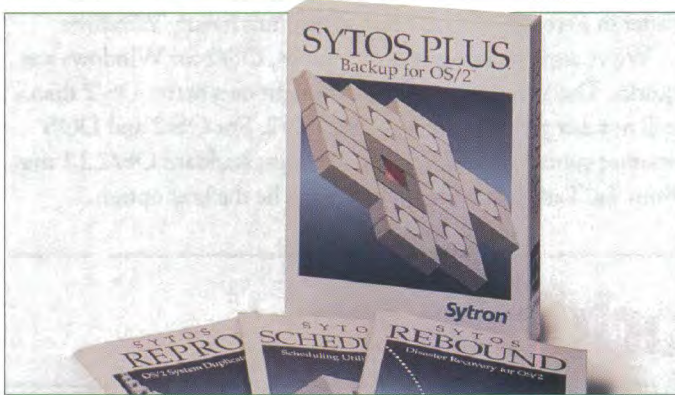
New AM products

Some challenging management issues can be addressed using AM Harvest and AM/5, two new products from Intelligent Environments. For users within a development team, AM/Harvest eases the complexities of shared and re-used code by tracking changes within the AM (Applications Manager) development environment. It also documents an entire AM application so that a programmer can determine the impact of the changes. AM/5 is an upgrade release of the flagship product from Intelligent Environments. The new release addresses the new trend towards object-oriented programming by allowing programmers to join together new and existing



code modules. AM/Harvest costs \$5,000 per server and is currently available. AM/5 will be available for OS/2 in March and upgrades are free to current AM users. Pricing is not yet determined but will

not exceed \$8,400 per developer, including one year of technical support and upgrades. Intelligent Environments, 2 Highwood Drive, Tewksbury, MA 01876, (508) 640-1080, fax (508) 640-1090.



Sytron releases

Sytron Corporation has released Sytos Scheduler, a Presentation Manager scheduling utility, and Sytos Repro, a duplication utility that builds new OS/2 systems from backup media. Sytos Repro is aimed at the corporate marketplace, especially system administrators and integrators who build multiple systems of the same configuration. Sytos Scheduler sells for \$70 before Jan.

1st, and \$99 thereafter. Sytos Repro's pricing is based on the number of systems to be built, starting at \$295 for five systems. Sytos Plus for OS/2, a DOS network backup system, comes pre-bundled with the purchase of the Repro unlimited pack. In addition, Sytron announced a new version of Sytos Rebound, a disaster recovery facility for OS/2. The new version, 1.2, includes a non-copy-protected disk and

recovery password protection. Sytos Rebound costs \$99. Sytron Corporation, 134 Flanders Road, Westboro, MA 01581, (508) 898-0100, fax (508) 898-2677.

Just ask ASK

ASK VisionPro and ASK Query and Reporting Tools are now available for OS/2 Presentation Manager. The character-based application tools from the ASK Group allow users to add GUIs without additional programming. ASK VisionPro is an application generator that unites a visual interface, a 4GL, testing facilities, and automatic code generator. ASK Query and Reporting Tools are used to develop ad hoc query and reporting tools. The products will ship this month. VisionPro for OS/2 PM costs \$650.

The Query and Reporting Tools cost \$400. The ASK Group, Inc., 1080 Marina Village Parkway, Box 4026, Alameda, CA 94501-1095, (800) 446-4737, fax (510) 748-2545.

Walk this way

Footprint Software is now shipping Footprint Works for OS/2, a 32-bit multi-module works application. Footprint Works offers five modules: word processing, spreadsheet, data file, charting, and report writing. The product is priced at \$149. Footprint Software, 53 Yonge Street, Toronto, Ontario, Canada M5E 1J3, (800) 465-8470, fax (416) 860-1780.

IBM networking suite

IBM has a suite of new network access products. The 8235 Traveler is a remote access solution that provides support for asynchronous connectivity. The Traveler costs \$4,200 for Token Ring environments and \$3,255 for Ethernet, and is currently shipping. A new card, the IBM WaveRunner Digital Modem, provides an ISDN connection to a PC at a speed of up to 64kbps. Priced at \$545 for the ISA bus and \$575 for the Microchannel version, the product will be available in January 1994. A third product is the NetWork Door/2, a computing environment that manages OS/2-based LANs. The software is used to create, expand, operate, and use an integrated LAN system. NetDoor costs \$550 per server. Also newly available is LAN

MARKETLINE

Distance, a remote access software package. IBM, (800) 426-2255.

Image catalogue

Media Cybernetics, a Silver Spring, Maryland-based company, is shipping HALO

Imaging Library for OS/2, a series of routines used to read and manage image files. The application is useful for desktop publishing or other systems that involve manipulating graphics files in most standard formats including TIFF,

JGP, and PICT. Media Cybernetics plans to release the next version of the product, called Advanced Imaging Library, in Q1 of 1994. The Q1 upgrade is designed for more scientific applications such as building an application

used for counting cells under a microscope. The Imaging Library costs \$599 for a single user workstation. Media Cybernetics, 8484 Georgia Avenue, Suite 200, Silver Spring, MD 20910, (301) 495-3305, fax (301) 495-5964.

News

Corel expands OS/2

Rumors that Corel Corporation is pulling out of the OS/2 market are unfounded. Indeed, the company is expanding its involvement with OS/2, according to an interview with Corel President Michael Cowpland first reported in *OS/2 Week*. The current version of CorelDRAW for OS/2 remains 2.5. The company did cancel plans for version 4, but only to allow it time to create a common API for cross-platform development, according to Cowpland.

CorelDRAW 5.0 is expected next year, with the Windows version scheduled for a May rollout and the OS/2 version to be released some three months later. Users will find a powerful graphics tool in the product because Ventura Publisher will be merged into CorelDRAW. Porting Ventura to OS/2 is already underway.

Corel sources confirmed that for the time being, Windows development will come first because of the larger installed base. But Cowpland says he has become increasingly confident about the OS/2 marketplace. "Corel-

DRAW 4 in Windows will run 12 percent faster in Ferengi [OS/2 for Windows] than it does in just plain Windows. The performance is actually the same for either Ferengi or OS/2 2.1, but Ferengi is less expensive."

Ambra begins to preload OS/2

Ambra Computer Corp., a subsidiary of IBM reporting to the IBM PC division, has agreed to preload OS/2 on request. Until now, Ambra computers have shipped with DOS and Windows factory preloaded. Not surprisingly, that has been a source of some consternation to IBM PSP officials, who contacted senior Ambra executives some weeks ago.

Ambra marketing director Craig Conrad stated in an interview with *OS/2 Week* that the decision to preload on request was not based on pressure from Austin, but rather on genuine market demand following the successful launch of the Ambra line several months ago. The line offers more than a dozen high performance models, including the 66 MHz "Blue Lightening" model which sports the

IBM-designed 486 DLC processor.

Conrad reports that Ambra did not preload OS/2 initially because "we are targeting the Gateway and Zeos market. Right now they aren't bundling OS/2. But the small to medium companies we are selling told us they wanted OS/2. So we made the decision."

At press time no starting date for the program was known, but senior executives declared, "It's a priority." The company will continue to factory preload DOS and Windows automatically.

Microsoft upgrades SQL Server for OS/2

In early November, Microsoft began shipping version 4.2b of SQL Server for OS/2. The upgrade adds a number of features including SQL Object Manager, SQL Administrator, Network Integration Kit technology, revised documentation, and a troubleshooting guide. This would bring the product's features set more closely in line with Microsoft SQL Server for Microsoft NT. Microsoft will make a pitch to current SQL Server for OS/2 users to migrate to "the higher performance

Microsoft SQL Server for Windows NT," which it said is fully compatible with its OS/2 product. Current users can get the SQL Server for OS/2 upgrade for \$199; migrating to the NT product requires a license exchange fee of \$995.

Free FileWorks

Until Jan. 1, 1994, Lorill Technologies, Inc., is offering a free copy of FileWorks version 2.0. FileWorks is an OS/2 data file editor for MicroFocus and Btrieve files. The software, valued at \$199, is used by developers in order to create, edit, browse, and print data while viewing COBOL. (813) 377-5430.

Proportional offers compression test

Proportional Software, the developer of DCF/2, is offering OS/2 2.1 users a compression test utility that can be used to determine what the results of implementing DCF/2 disk compression would be. The free utility is available on a variety of electronic bulletin boards (on CompuServe, GO OS2AVEN, and download dcat10.exe from section 6) or through the company. (800) 666-4672. ♦

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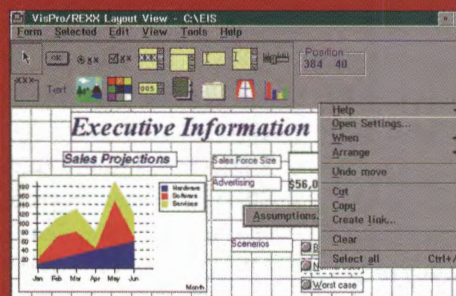


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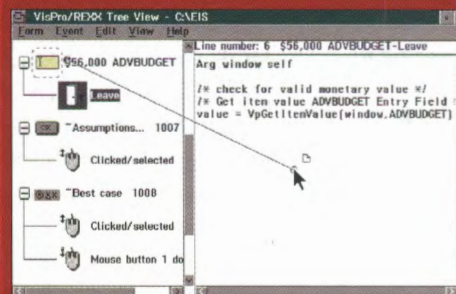
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Getting Started in OS/2 REXX

BY TONY PEREIRA

REXX is an easy to learn yet powerful programming language included with every copy of OS/2. While it is certainly possible to use the operating system without it, learning to customize operations using this simple but potent language will increase substantially the power and control you have available.

This column will help you get started with REXX, delve into the REXX OS/2 Utility extensions, including Workplace Shell (WPS) Object manipulation, and issue and control OS/2 commands from your REXX programs. As part of our tutorial, we'll help you produce a working program that reads through CONFIG.SYS and creates a backup, creates a WPS folder, shadow and program objects, and executes OS/2 commands.

If you think REXX is simply OS/2's replacement batch facility for DOS, think again. This common misconception is fueled by the file name similarity of OS/2 batch files and REXX programs (both use .CMD as the extension). Furthermore, you can convert many DOS batch files (.BAT) to OS/2 batch files simply by changing the extension to .CMD. (However, converting the files to REXX programs requires at least one more step: a REXX file must start with a comment line such as **/* A standard REXX Comment */**.) But if you really want to take advantage of REXX, you will need to learn the language.

OS/2's REXX is an interpreted language rather than a compiled language. The REXX interpreter converts each statement from its source language into machine language and immediately executes the command. In contrast, compiled languages such as C convert all of the lines into machine language before executing the program. These converted programs frequently use the .EXE file extension.

In spite of the performance penalty associated with interpretation during execution, OS/2's REXX is sur-

LISTING 1

A SIMPLE REXX PROGRAM

```
/* REXX Interpreter invoked by a comment being the first
   statement */

/* Additional comments document the program*/
Say "We'll be learning enough REXX to get started!"
Say Please enter your OS2 boot drive name? 'e.g. C:'
Pull BootDrive
If BootDrive = '' then
    say 'Not going to "play" our game, eh?'
else
    say "Thanks! You are indicating OS/2 is on the" BootDrive
    "drive."
Exit /* Exit ends the program immediately */
```

LISTING 2

ADDITIONAL IF...THEN...ELSE EXAMPLES

```
If (cost + expenses) > price then say 'Reduce Expenses'

If BattingAvg < .300 then call BattingPractice
Else Say 'Take the day off!'

EitherOr = 1
....
If EitherOr then do; a=b+c; call FirstTime; end;
Else EitherOr=0
```

LISTING 3

CONDITIONAL EXPRESSIONS

```
a = 10
b = 5
answer = 'YES'
```


CODE CACHE

```
condition = a < b    /* condition=0 or false */
condition = a > b    /* condition=1 or true  */
condition = a >= b   /* condition=1 or true  */

condition = (answer = 'NO')
    /* condition=0 or false, parentheses not required */

condition = (a >= b) & (answer = 'YES')
    /* condition=0, parentheses not required */
```

LISTING 4

FILLING AN ARRAY WITH RANDOM NUMBERS

```
DO a = 1 to 10
array.a = Random()
    /* Random() is a built-in REXX Function
    evaluated here as a random whole number */
say array.a
END
```

LISTING 5

ALTERING FLOW OF A DO LOOP

```
DO FOREVER
...
...
...
If okay = 1 then ITERATE
ELSE SIGNAL labelname
...
END
...
...
labelname:
    /* labels are names followed by a colon (:) */
```

prisingly fast. REXX gets performance edge through a trick: The first time you run a REXX program, the interpreter stores a tokenized version of the program in the file's extended attributes. It's like a partial compile that improves the execution speed for subsequent runs. You'll find that working with an interpreter *really* simplifies learning the language by encouraging exploration through trial and error.

As you build your first program, you can create and modify the file with the text editor or word processor of your choice. For demonstration purposes, I selected the OS/2 Enhanced Editor (EPM.EXE) found in OS/2's Productivity folder.

As many professional programmers have discovered, OS/2's multitasking provides a powerful development environment. Like the pros, you can run both the editor and a test window simultaneously. To begin, start an OS/2 window Command Prompt for your test session. For best viewing while editing and testing, split your screen into two horizontal windows. Place the Editor window at the top of the screen and the Command Prompt window below it—you'll be able to view your source code at the same time you run your tests.

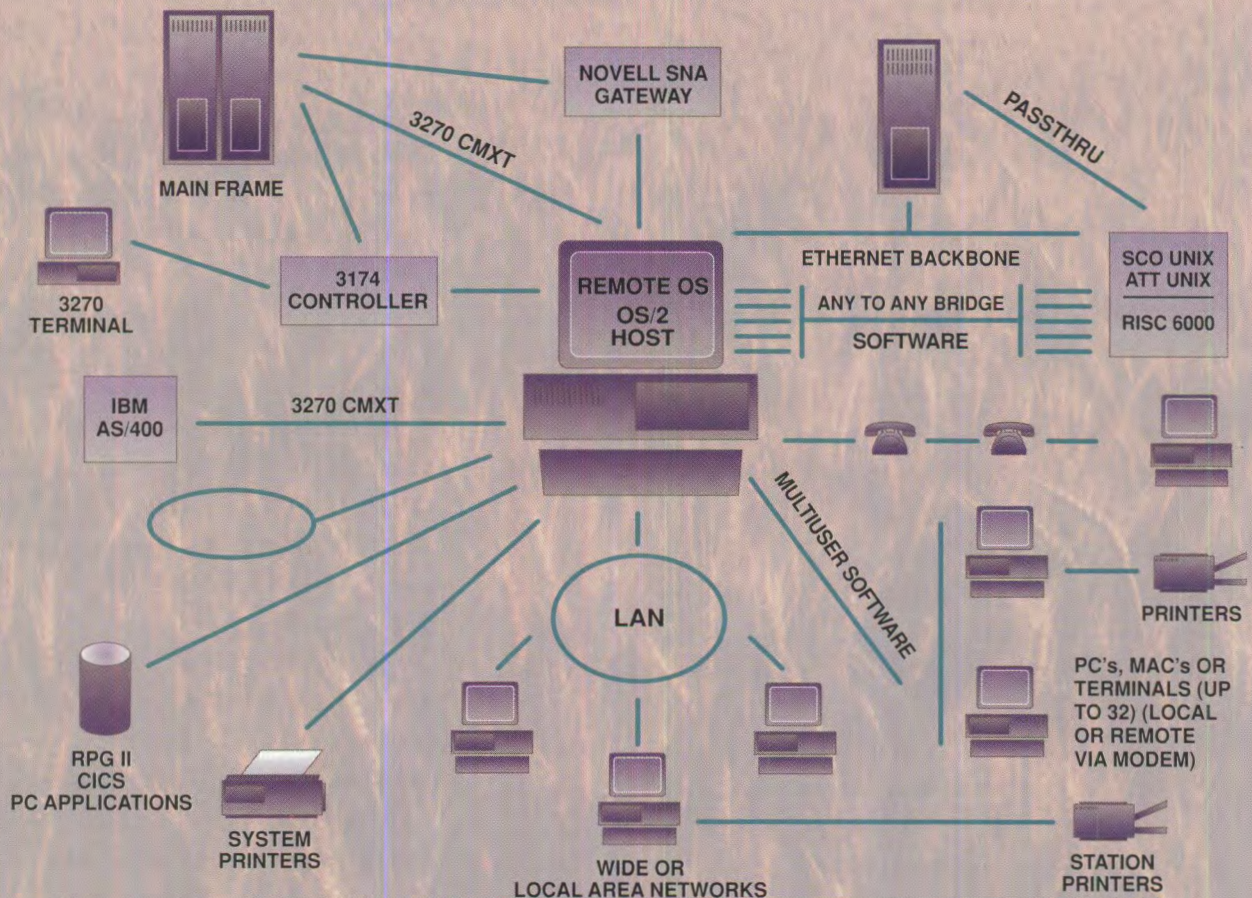
To write your first REXX program, type Listing 1 into the editor and save it as FIRST.CMD. After saving, don't close the editor! Instead, move to the command prompt window, change the directory, and enter the program name: **FIRST**. If you typed everything correctly, the program should produce the output displayed in Figure 1 (See page 76). If REXX returned an error message, the error will reference a line number in your program. (Most editors identify the line number where the cursor is positioned. If you're using EPM, check the status line at the bottom of the window).

If you don't find a problem in the reported line, check the preceding line, which can sometimes cause the infraction. Many errors stem from unbalanced quotes (a missing open or close quotation mark). Forgetting the opening comment is another common error.

As you find and fix errors, you simply save the changes (F2 with EPM), bring the Command Prompt window to the foreground, and re-execute. Make changes and re-execute often! Learning by trial and error is one of the benefits of working with an interpreter like OS/2 REXX.

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LISTING 6

THE COMPLETE PROGRAM FOR LISTING AND
BACKING UP CONFIG.SYS.

```

/* REXX Interpreter invoked by a comment being the first
   statement */

/* Additional comments document the program*/
Say "We'll be learning enough REXX to get started!"
Say Please enter your OS2 boot drive name? 'e.g. C:'
Pull BootDrive
If BootDrive = '' then
    say 'Not going to "play" our game, eh?'
else
    say "Thanks! You are indicating OS/2 is on the" BootDrive
        "drive."

/* Read each statement in Config.Sys
and display on the screen */
index=0 /* Initialize an array index */
Do until lines(BootDrive"\config.sys") = 0
    index=index+1
    EachLine.index=linein(BootDrive"\config.sys")
    Say EachLine.index
    rc=Lineout(BootDrive'\ConfigBK.sys', EachLine.index)
End
EachLine.0 = index

/* Convention to remember an array size
Save the # of entries in the .0 entry */
rc=Lineout(BootDrive'\ConfigBK.sys')

/* "Close" the file */
Exit /* Exit ends the program immediately */

```

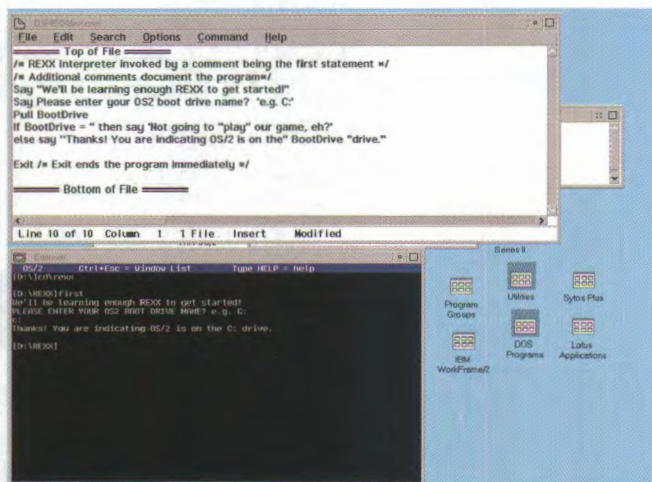


Figure 1

A Guided Tour

In addition to the required initial comment, you may include commented text anywhere within a REXX program. Whenever REXX sees a `/*` it stops interpreting until after the next `*/`. Through liberal use of comments, you can document your programming with descriptive text that will simplify later modifications and debugging.

The two lines after the comments include **Say** instructions. **Say** instructions display character strings on your monitor. The text will be converted to UPPER CASE unless you enclose the string in quotes or apostrophes. Use quotes (") to enclose strings that contain apostrophes (') and vice versa. In addition to designating text in a **Say** statement, apostrophes and quotes also isolate strings from variables (more about variables later).

The **Pull** instruction tells REXX to wait for input from the keyboard. The user then keys in any string of text and completes the string with the enter key. REXX places the string into the argument(s) following the **Pull** instruction. In the example, the argument is the variable named **BootDrive**.

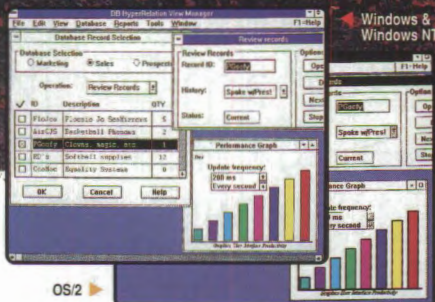
Most programs act on user input by comparing the data to an anticipated answer. This is done through comparison expressions (such as **BootDrive = ""**) that evaluate to either 1 or 0 (true or false, respectively).

Comparison expressions usually lie within flow control statements. The **If...Then...Else...** construct is the most common form of flow control. The statement following **Then** executes whenever the comparison evaluates to 1. In the example, the program checks whether the value is null (i.e., the question was not answered). If no answer was given, the program prints **Not going to "play" our game, eh?**

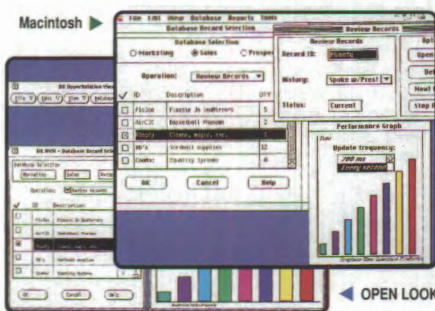
You may optionally include an **Else** statement that executes if the answer is false. In the example, if the answer is not null, the program assumes it really is a correct value and prints **Thanks! You are indicating OS/2 is on the C drive** (or whichever drive letter the user entered in place of C:). REXX inserts the drive letter by referencing the variable **BootDrive**. Note that within the **Say** instruction the two literal strings are each enclosed in quotes; however, **BootDrive** has no surrounding quotes. This construct lets you display variable

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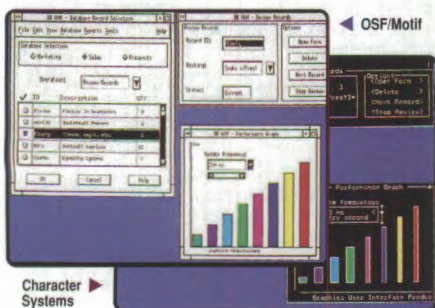
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information in meaningful sentences. The additional **If...Then...Else** examples in Listing 2 highlight variations of this very commonly used instruction sequence.

Variables

What if you want to expand your program's abilities to include simple arithmetic and repeated loops? To track quantities (user-specified numbers and iterations through a loop) you will use a variable—a label or symbol to which REXX assigns a value.

Unless overridden with an assignment operation, the REXX interpreter initially evaluates a name as the upper case characters of the name. Technically it is not yet a variable. Thus, the simple statement: **Say AnythingAtAll** will print **ANYTHING-ATALL** on the screen.

In all cases, except when it is used within a comparison expression, REXX interprets **=** as the assignment operator. You may assign either text strings or numbers to a variable: **AnythingAtAll = 'Variable information'** or **AnythingAtAll = 10**. In the former case, **Say AnythingAtAll** would print **Variable information**; in the latter case it would print **10**. You can com-

bine text, variables, and expressions within a **Say** statement to your heart's content. Following the assignment to 10, a simple **Say "10 minus 3 is: AnythingAtAll - 3** would print **10 minus 3 is: 7**.


REXX accepts almost anything as a variable name so long as you follow a few simple rules:

1. Do not use a numeral or a period as the first character of the name.
2. Do not use more than 250 characters in the name.
3. Within the limits of rules 1 and 2, use any of the following characters: alphabetic characters *a* through *z*; Numerals 0-9; and the characters *!* *?* and *_*.

Variable names are not case sensitive; hence, REXX evaluates both **aBcD** and **AbCD** as the same name.

Simple Arithmetic, Logical Expressions, and Loop Processing

For your initial forays into REXX, a few simple arithmetic rules will suffice. You can find a precise definition of the arithmetic facilities in Chapter 6 of the REXX Reference Manual (which



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can be ordered from IBM as Manual # S10G-6268).

1. Numbers are character strings. They may have an optional decimal point and sign (+ or -): **10, 48.03, -.003**. You may include the letter **E** to designate exponential notation (e.g., **2.07E4**).
2. Leading and trailing blanks are allowed but ignored. **-.003**, **'-.003'**, and **- 0.003** all evaluate to the same number.
3. The **NUMERIC DIGITS** instruction sets the maximum number of significant digits. REXX uses 9 significant digits by default (e.g., **8 / 9** is 0.88888889). **NUMERIC DIGITS 10** would change the setting to 10 significant digits.
4. REXX supports the following arithmetic operators: addition (+), subtraction (-), multiplication (*), division (/), power (**), prefix plus (+), prefix minus (-), integer divide (%), and remainder (//). You have probably used most of these, with the possible exception of the integer divide and remainder operators. The integer divide returns only the integer part of a divide: **10 % 3** returns **3**. The remainder returns only the remainder portion of a division operation: **10 // 3** returns **1**.
5. Trailing zeros are preserved after all arithmetic operations

except division and power, which remove trailing zeros (e.g., **5.30 + 10** returns **15.30**, not **15.3**).

6. Arithmetic operations follow standard precedence rules: first evaluated are prefix operators (+, -), followed by power, multiply and divide, and finally addition and subtraction. Ties are broken by left-to-right evaluation. You may further alter the order of operations by enclosing a portion within parentheses (which evaluate immediately). Thus **3*7+4** is 25 (not 33), **3**2**3** is 729 (not 6,561), and **(3+5)*7** is 56.

Comparison Operators

The sample program uses the = comparison operator to alter the sequence or logical flow of the program. The basic comparison operators are *equal to* (=), *greater than* (>), *less than* (<), and *not* (\). REXX recognizes many combinations of these basic symbols for more advanced operators, among them *less than or equal to* (<=), *not equal to* (\=), and *strictly equal to* (==).

REXX supports a total of 18 comparison operators. To further extend their utility, you can compound comparison expressions with the logical operators *and* (&), *or* (|), and *exclusive or* (&&).

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All such expressions evaluate to either 0 or 1. See Listing 3 for some examples of conditional expressions. In addition to the **If...Then...Else** structure, conditionals may be used within the conditional **Do** loops: **Do While** and **Do Until**.

Loop Processing

Do loops provide the basic structure for repeating a group of instructions in REXX. REXX offers several variations on the basic **Do value End**. The following loop between **Do** and **End** will execute ten times:

```
a=2
DO 10
a = a * 2
say a
END
```

This **Do** loop will display the following sequence of numbers:

4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048

Alternatively, you may use a variable as both the loop controller and an index into an array variable. Listing 4 fills the array **a** with random numbers.

Do While is one of the most useful variations of the **Do** instruction. Simply code a conditional expression following **While**. The loop will execute while the condition remains true. For reverse thinkers, there's also **Do Until**. Now the loop will terminate when the expression becomes true (or in other words, continue to execute on a false expression). In the following example, you could substitute **Until a >= c** for **While a < c**:

```
a = 10
b = 100
c = 1000

Do While a < c
a = a + b
say a
END
```

A few extra instructions add further control to your **Do** loops. **Iterate** will force REXX to skip to the **End** statement (at which point it will loop again or return to the first instruction of the loop). **Signal** will cause program execution to jump to a labeled line. You would typically use **Signal** to jump out of a **Do Forever**.

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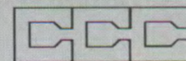
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er loop, which would otherwise execute continuously (**Exit** will also break out of a **Do Forever** loop). See Listing 5 for a prototype **Do Forever** with an **Iterate** and **Signal** instruction.

I/O Operations

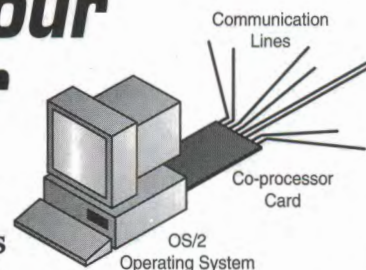
REXX provides a number of functions that return system-generated values. We will use three functions that perform I/O operations: **LINEIN(filename)** which reads a line from a file, **LINEOUT(filename)**, which writes a line to a file, and **LINES(filename)** which acts as an end-of-file indicator. Notice that functions have a function name immediately followed by an open parenthesis. Atypically, REXX will not allow a space between the function name and the parenthetical expression.

The value of **LINES(filename)** is either 1 (more lines are available) or 0 (end of file). Use **LINES** as the condition of a **Do** loop to read through an entire file. The variable *filename* should specify a fully qualified file name (complete drive, path, and name).

You can use **LINEIN** with the assignment operator to temporarily store lines from a file. **lineString = LINEIN(filename)** reads a line from the file and places a single record (line) into the

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variable **lineString**. You may then alter the string or simply pass it along to the screen or another file.

Should you decide to write the line out to another file, a statement such as **rc=LINEOUT(filename, lineString)** will write the data string in the variable **lineString** to the specified file. Note the variable **rc**. **LINEOUT** returns either a 0 or 1 after completion: 0 indicates successful completion and 1 indicates an error.

We now have enough REXX tools to list **CONFIG.SYS** on the screen or write a backup copy to a new file (in the next issue we'll modify the copy of **CONFIG.SYS**). Listing 6 contains a complete program that incorporates the original prompts from Listing 1. When you save and execute the modified program, you will see the contents of **CONFIG.SYS** appear before your eyes.

Note the **Do** loop in Listing 6. Unlike the simple **Do** loops shown earlier, we have used a separate line within the body of the loop to act as the counter (**index=index+1**). This lets us execute the loop without predetermining the line count in **CONFIG.SYS**.

We create a unique holding area for each line through the **EachLine.index** structure. The **index** portion simply creates a unique identifier for each line (the number of the line). **EachLine** thus becomes an array that has one element for each line for the **CONFIG.SYS** file. Note that the program also writes a backup copy of the file (named **CONFIGBK.SYS**) as it displays the file on the screen. Finally, REXX closes the file when **LineOut** executes with only a file name in the function call (in truth, it simply repositions file processing to line 1, enabling the file to be read).

There are many other instructions and built-in functions in the REXX language. In future issues we'll explore the REXX OS/2 Utility functions, and how to obtain important system information and create and manipulate objects in OS/2's Workplace Shell. In the meantime, I encourage you to explore the documentation and try as many new REXX functions as possible to gain more familiarity with this powerful programming language. ♦

An OS/2 Professional in his own right, Tony Pereira is president of the consulting firm Clear & Simple, Inc. He is an active OS/2 developer, educator, consultant, and entrepreneur. His popular OS/2 product "PERFORMANCE 2.1 - A Tuning Kit for OS/2" is written entirely in REXX.

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Circle #177



TIPS AND TECHNIQUES

BY GORDON SCOTT

If there's one thing a personal computer must do well, it's word processing. OS/2's unique features take word processing to a higher level. It should come as no surprise that three full-function word processing applications are now available on OS/2: DeScribe, version 4.0; WordPerfect for OS/2, version 5.2 (the end of the line for their native OS/2 development); and Ami Pro for OS/2, version 3.0. These applications each have different strengths, but all three share a common benefit: They were written to exploit the OS/2 operating system.

OS/2 provides important advantages to applications through its ability to support multithreaded programs—programs that run some tasks simultaneously. All three word processors support the most obvious use of multithreading: printing as a separate task. While many operating systems support print spooling, you must still wait while the document fills the spooler—a process that can take several minutes for a long or complex document. Multithreading substantially reduces that delay and, in some cases, eliminates it altogether.

But the advantages of an OS/2-based word processor are not confined to printing alone, or even to subjects related to OS/2's preemptive multitasking. OS/2's Templates concept and word-processing programs have a natural synergy. Most users group their word processing work by style and purpose (letters, legal documents, proposals, and so forth). Templates let you specify the common elements once and use those styles repeatedly in many different documents with a minimum of effort.

The following three tips demonstrate the use of OS/2 Templates for each of the OS/2-based word processors.

Change DeScribe's "layouts" into template objects.

How to do it:

- Open the Drives folder and locate the icon for the DeScribe directory. For example, if you installed DeScribe into the path D:\Describe, then you would find the DeScribe folder under the D: drive icon. Within the DeScribe folder you will find another folder (subdirectory) named Layouts. Layouts holds about a dozen pre-formatted files with names like Ltrhead, Memo, and Fax.
- Locate the layout files in the Layouts subdirectory folder.
- Select any one of the layout documents and open the Settings notebook for it.
- Select the **General** tab in this document's Settings notebook.
- Select the **Template** check box near the bottom of the page.
- Close the notebook.
- Repeat the last four steps with the other layout files you will use regularly.

Use Ami Pro's sample document template to create pre-styled documents.

How to do it:

- When you install Ami Pro, it creates a sample template for you in the Templates folder. This template will help you quickly create and edit documents with pre-set styles and content.
- Open the Templates folder.
 - Select the **Template** labeled "Ami Pro Document.Sam".
 - Press and hold mouse button 2 (the right button on a right-handed mouse). Notice that the mouse pointer turns into an Ami Pro icon.
 - Drag the icon to an open spot on the desktop, or into the folder of your choice. This creates a new file with its own pre-set styles for bullet lists, num-

bered lists, titles, subheadings, and more.

- Rename the file by pressing the Alt key while clicking on the icon with mouse button 1 (the left button on a right-handed mouse).
- Double click on the icon to load your new document into Ami Pro.

Use templates from WordPerfect's internal Templates folder.

How to do it:

- Rather than add further clutter to OS/2's burgeoning Templates folder, WordPerfect 5.2 for OS/2 creates its own Templates folder with five basic document prototypes. You will find the WordPerfect Templates folder inside WordPerfect's main folder. You can quickly create a new document from any one of these boilerplates.
- Open the WordPerfect Templates folder.
 - Select any one of the templates located in this folder.
 - Press and hold mouse button 2. Notice that the mouse pointer turns into a data file icon.
 - Drag the icon to an open spot in the folder, or onto the desktop.
 - Rename the file by pressing the Alt key while clicking on the icon with mouse button 1.
 - Double click on the icon to load your new file into WordPerfect.

Use DeScribe's Data folder and tool bar for well-integrated drag-and-drop functions.

How to do it:

- Open the folder named **Data** in the folder labeled DeScribe 4.0 (DeScribe creates this folder on your desktop when you first install the program).
- Start DeScribe.

TIPS & TECHNIQUES

- Resize the DeScribe window and the open Data folder so that both fit on the screen without overlapping.
- Drag a DeScribe document from the Data folder and drop it on the insert icon on DeScribe's tool bar. (Notice that the focus never leaves the Data folder window. This lets you repeat the action without having to resurface the folder.)

What this buys you: quick document operations.

DeScribe's drag-and-drop functions let you drag icons from the Data folder onto key areas of DeScribe's toolbar. Using this function you can quickly merge several documents into a larger single document. Furthermore, you can simultaneously print several documents without ever opening them. Once you start a print job in DeScribe you may immediately begin other word process-

ing operations (such as editing a document or selecting another print run).

Use WordPerfect's drag-and-drop features to add graphics or create tables from spreadsheets quickly.

How to do it:

Spreadsheets:

- Be sure the WordPerfect program icon is in view.
- Locate a spreadsheet file in the Drives folder. (If you have a 123-compatible spreadsheet or PlanPerfect format spreadsheet on your system, open the directory folder where it is placed.)
- Drag the spreadsheet file onto the WordPerfect Program icon with mouse button 2. (WordPerfect starts and automatically converts the spreadsheet data into a table.)

How to do it:

Graphics:

- Begin with an open document.
- Locate a graphics file in WordPerfect's Graphics folder.
- Drag a graphics file onto the document area. (WordPerfect automatically imports the image and flows text around it.)

What this buys you: simple execution of complex tasks.

Using drag and drop, WordPerfect (as well as Ami Pro and DeScribe) makes graphics insertion as simple as a single mouse movement. WordPerfect further enhances drag-and-drop operation by automatically converting spreadsheets into tables. Now you can load a DOS spreadsheet into an OS/2 word processor and not get an error message!

Workplace Shell integration, improved printing, drag and drop func-

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TIPS & TECHNIQUES

tions, single station network installation, automatic document association, templates, and REXX integration, are some of the benefits users derive from OS/2 word processors. OS/2 is great at so many things, you would just expect that it should be a great word processing platform as well. ♦

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Gordon Scott writes on-line help and tutorials for OS/2 applications at IBM's Santa Teresa Laboratory in San Jose, California. Share your tips with OS/2 Professional readers by sending them via the Internet to gscott@stlvm22.vnet.ibm.com. Gordon Scott can also be reached normal business hours at (408) 463-4483.

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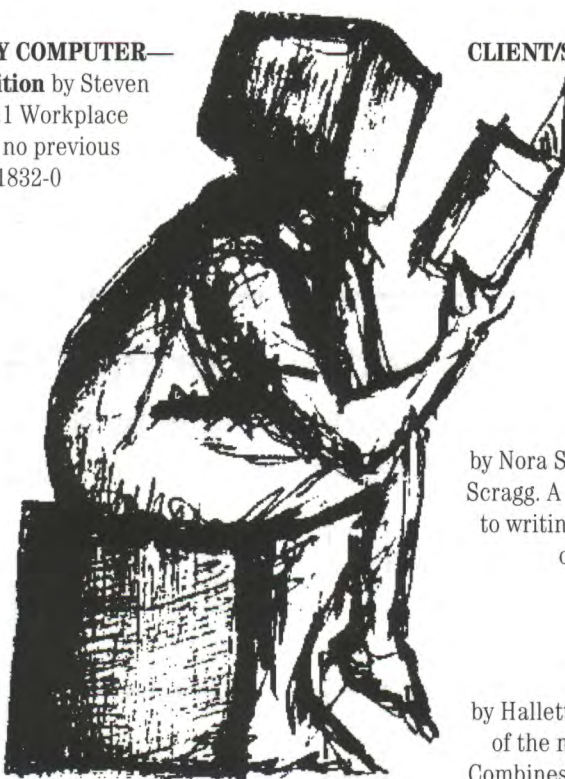
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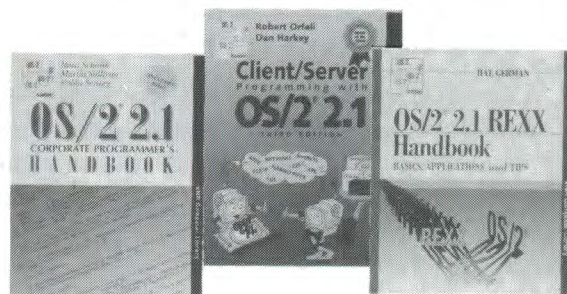
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OS/2 Inside & Out

by Kathy Ivens and Brian Proffitt, Osborne McGraw-Hill, 531 pages, \$29.95

REVIEWED BY ALAN JAY WEINER

Anyone can make something complicated. Simplifying a subject requires skill and knowledge. Knowing what to leave out is as important as knowing the topic itself. *OS/2 Inside & Out* demonstrates the skill and knowledge of its authors. The explanations are simple and understandable; Ivens and Proffitt keep technical jargon to a minimum and clearly explain technical terms when they are used.

This simplicity is apparent immediately. Chapter One walks you through your computer system, explaining the various pieces and their functions. The walkthrough continues with OS/2's role as the operating system, explaining concepts such as multitasking and time slices, device drivers and virtual device drivers. Written for the non-engineer, these functional descriptions will help you feel more comfortable talking with those hard-core techies from the computer support department.

Most of *OS/2 Inside & Out* is for the real-world user, the person who wants to use OS/2 effectively without needing a technical degree to understand the documentation. When the authors describe OS/2's built-in Adobe Type Manager, for example, you pick up the basic language of fonts. You won't be forced to learn typography or the inner workings of font engines; *OS/2 Inside & Out* sticks with the everyday activities such as changing fonts, installing them, and using them in your documents.

You'll learn a little bit about everything. Ivens and Proffitt have touched on virtually every topic within OS/2. They explain the usual—Workplace Shell, command line utilities, help and information folders, and so on—but they also cover areas where information is less commonly available.

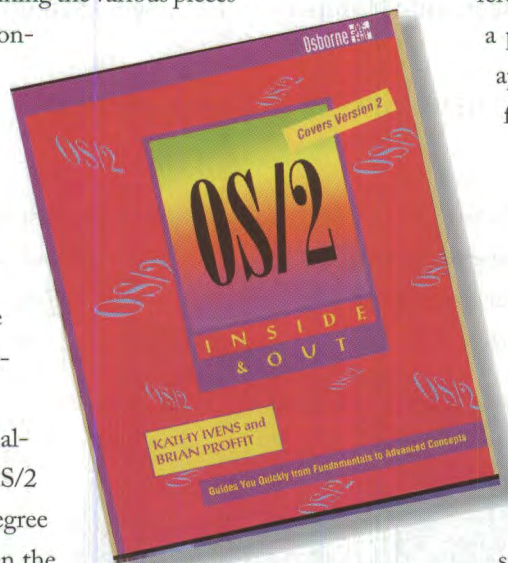
The authors teach you what to look for when purchasing new programs, for example. Programs written expressly for OS/2 take advantage of the many features the operating system has to offer, such as a separate thread a program might use to permit one file to print while you're working on another file. Simply using a DOS or Windows program, or a program that was ported without using these additional features, might force you to wait until the first file was printed. Knowing the different choices developers use when converting a program to OS/2 will allow you to choose applications that fully exploit OS/2's advanced features.

On the other hand, many of us have applications we're comfortable with, and don't wish to change. There are many settings and options to allow these programs to work better, to coexist with other programs, or to work with OS/2 at all. Most manuals and the on-line help explain these settings in obscure computer terms. *OS/2 Inside & Out* does a good job of explaining them in under-

standable user-level language. Now when

you're told to "lower the IDLE_SENSITIVITY and set IDLE_SECONDS to zero" you'll know that the program is polling and using too much of the system's time (*polling* is explained on page 221).

Throughout the book tips explain what to do when common problems occur, or what changes will make OS/2 faster or more convenient to use. A section of insider's tips offers ways to prevent problems and how to handle them should they occur. Where this, or any other book of this type, falls down is in being unable to reflect software changes made since it was published. For example, IBM has issued fixes to the shutdown problem,



where the final "shutdown is complete" message fails to appear.

In addition to the day-to-day material, the authors explore numerous other areas. Some of it is of little use—how to play the games, for example. But much of it is information you will use as you become more familiar with OS/2. You'll likely use the System Editor or the Enhanced Editor to change configuration files and write batch files; Ivens and Proffitt explain how to use both. OS/2 offers a simple programming language, REXX, that expands on the user's ability to automate actions with batch files. While significantly more powerful than simple batch files, it's easy to learn. *OS/2 Inside & Out* can

guide you to proficiency with REXX.

Overall, this is an excellent handbook for the beginner to intermediate user. Those who spend a lot of time tweaking their systems, installing additional equipment and software, and in general being invasive, will find this book insufficient. But for those whose goal is to use rather than optimize, *OS/2 Inside & Out* will help them understand what they're doing with OS/2. ♦

Alan Weiner is president of Technology 21 in Waltham, Massachusetts. He's been inside of computers since the late '60s. He can be reached on BLX as "arweiner" or on the Internet as "arweiner@bix.com"

Van Wolverton's Guide to OS/2

by Van Wolverton and Jim Meade, Random House
Electronic Publishing, 121 pages, \$16.00

REVIEWED BY ALAN JAY WEINER

If you support neophyte users, *Van Wolverton's Guide to OS/2* may well be for you—or, more properly, for the users you support. Aimed at taking the reader from square one to comfortable proficiency, the book emphasizes the information needed to work daily with OS/2's Workplace Shell. In fact, the authors take pride in what they've left out. What remains are the basics: starting programs, shutting down OS/2, and most importantly, how to use the help system.

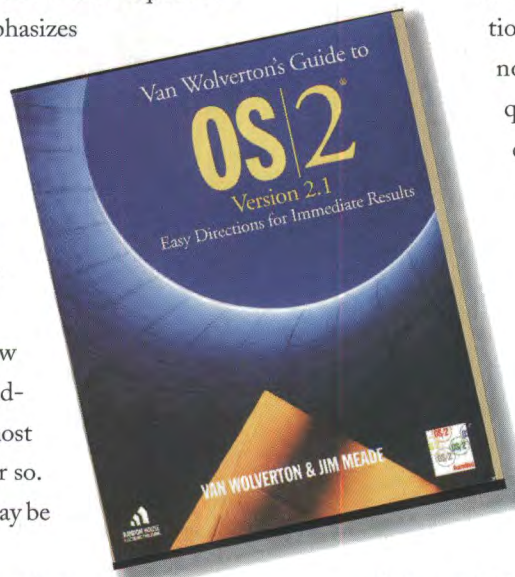
As you might expect, users will outgrow *Van Wolverton's Guide to OS/2* rather rapidly; even the slowest learners will know most of what's in this book within a month or so. But for those first few weeks this book may be quite useful.

Experienced computer users know what they want to do. They just need to know how to do it with OS/2. Inexperienced users, however, are easily confused;

even after initial lessons from technical support staffers, they'll need help with basic concepts. Here's where *Van Wolverton's Guide to OS/2* shines: They can reread the sections they've forgotten. There's no penalty, no feeling of inferiority for asking stupid questions, no overwhelming mass of technical information to wade through. This simplicity is both the book's strength and its weakness.

The technical support department will still have its work to do. Despite installation instructions offered in an appendix—all of five pages long!—a novice should not be tackling installation issues.

However, if this book saves even one or two calls to technical support, it will have paid for itself. In a month's time, trade it in for a more comprehensive book and pass *Van Wolverton's Guide to OS/2* on to the next new OS/2 user. ♦



continued from page 13

your criticisms of Windows and/or Microsoft have some basis in fact or perception. I accept them in that vein. *OS/2 Professional* has a good chance to become a valuable magazine.

I just thought that since I wrote a critical letter I could also write a complimentary one when your performance so well merited it.

Ernest Fisch

Phoenix, Arizona

Split threads

First let me thank you for producing an excellent magazine. I found the article on OS/2 vs. NT [Special Report, August] most informative. However, I would like to dispute one point made by Mark Minasi. He states, under the heading "Better Interrupt Servicing," "It [OS/2] won't switch to the higher-priority thread until the timeslice is over." This conflicts with Deitel and Kogan who state (*The Design of OS/2*, page 117), "A thread runs for its entire timeslice unless an interrupt occurs that results in making another thread of a higher priority class ready to run." They also state on page 135, "OS/2 guarantees that a time-critical thread that is made ready to run will be dispatched within 4 milliseconds."

This means that if a lower-priority thread is not executing a kernel routine, the higher thread will be dispatched immediately. If it is executing a kernel routine then the higher priority task will be dispatched within 4 milliseconds. This means that given worst-case circumstances NT could reschedule a thread 3 milliseconds sooner. But remember this is rescheduling time; the critical factor for high performance I/O devices is interrupt response time and I have always found OS/2's response times more than adequate.

A key point to bear in mind is that OS/2 is designed to provide the best response to the application that the user is working with. This gives the users high productivity. With this in mind it might be worth asking that if NT task-

switches so often, how much CPU time is wasted when it could be performing useful functions?

Geoff Drake

Bristol, United Kingdom

Check that review

I am puzzled regarding the review of "Dvorak's Guide to OS/2" [Bookstax,

October]. Who is Hugh Kenner? Why did you bother publishing that review? Mr. Kenner states that he doesn't know OS/2, doesn't like OS/2, and has never even seen OS/2 operating. You might as well ask a Catholic priest to review the "Kama Sutra." Why would he expect to be able to install a new operating system for the non-bootable floppy-

continued on page 94

Return to the OS/2 Oasis

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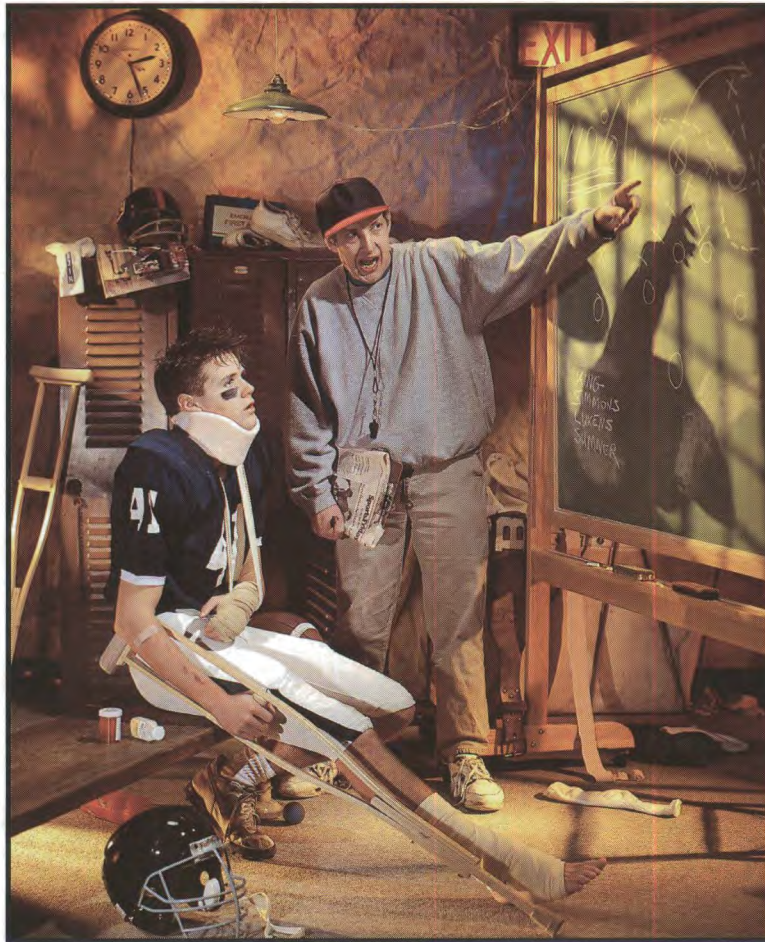
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JANUARY 10-13

OBJECT WORLD

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This second Object World/Boston will explore object-oriented technology through case studies. The schedule includes one day of tutorials and three days of exhibition, designed for technology planners, engineers, software designers, and analysts. Topics will include "The Technology of Objects," "Objects in Business," and a "Software Developer's Track." Contact: (508) 879-6700.

JANUARY 11-12

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JANUARY 17-21

USENIX WINTER TECHNICAL CONFERENCE

San Francisco, CA

The winter Usenix conference marks the 19th year of the biannual show for hard-core Unix users. The five-day show is divided into two parts: technical and tutorial. The technical sessions (\$295 for Usenix Association members, \$360 for non-members) will be presented on Monday, Tuesday, and Wednesday, opening with a keynote speech by John Perry Barlow of the Electronic Frontier Foundation on recent developments concerning the national information infrastructure and telecommunications regulations. The tutorials on Thursday and Friday (\$275 per day, \$495 for both days) include "Essential Unix Programming" and "Client/Server Development with DCE/RPC." Vendors will display their products on Tuesday and Wednesday morning. Contact: (714) 588-8649.

JANUARY 18-21

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The Client/Server Conference & Exposition seeks to address real-life problems and real-life solutions. This year's conference offers five tracks: Strategic Issues & Case Studies, Distributed and Cooperative Database Processing, Enterprise Networking and Mobile Computing, Developing Client/Server Applications, and Client/Server Systems Integration & Management. Using Fortune 1000 companies such as Chase Manhattan and Sara Lee as examples, the show explores implementation choices in developing client/server systems. Contact: (516) 562-7460.

JANUARY 25-27

AUDIOTEXT FORUM

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This year's Audiotext Forum focuses on global opportunities for the Audiotext market, which includes communication products and audiotext services. It offers an opportunity to network with representatives from many countries. Dionne Warwick will be opening up the conference on the evening of January 25, followed the next morning by a keynote speech by Richard Gordon of the R.J. Gordon & Company on "The Future of the Audiotext Industry." Contact: (310) 278-8080.

JANUARY 26-28

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py? Did he ever try that with MS-DOS? I mean a new installation, not the upgrade. In his own words, "Bah!" My apologies if the criticism offends, Mr. Kenner, but you should not have accepted this assignment. I want a magazine about OS/2, not a journalism course on how to review or compare technical publications.

Ralph Wenzel

Westminster, California

The October issue of *OS/2 Professional* included a review of Dvorak's OS/2 book by Hugh Kenner. According to the article, Mr. Kenner has never used OS/2. Wow. I read that part three times and I'll bet I'm not alone. Furthermore, the reason given (that he uses Stacker 3.0, and that if he used the OS/2 version it is for after your OS/2 is running) is false.

Stacker for OS/2 and DOS does provide for an OS/2 install after being stacked. Granted, it is a very ugly procedure. I suggest the following, assuming you are using Boot Manager with DOS also on the system: Always put OS/2 in its own partition of about 40 megs. If you need to install or re-install OS/2, just delete all Stacker references to that drive in the DOS config and autoexec files, reboot, format that drive, install OS/2, then restack.

I was in the beta groups for both OS/2 2.1 and the OS/2 Stacker product. Suffice to say that I had the opportunity to exercise the above procedure repeatedly and I found it to be the cleanest and easiest way to fix my world.

Following the beta period Stacker sent me a copy of the retail product and it has proven fast, flawless, and invisible. IBM apparently agrees as Stacker is now bundled with OS/2 2.1 in Europe.

Johann B. Kemsuzian

Fairfield, Ohio

Reviews of the review

I just finished reading the review of WordPerfect 5.2 for OS/2 [September]. I found the review very complete, but I have a few problems with the

INPUT

performance results.

It was stated that in almost all areas WordPerfect for Windows was faster when run from native Windows or from WIN-OS/2 than the OS/2 version. I have not found that to be true. I have both the Windows and the OS/2 versions loaded and in most areas I find the OS/2 version a bit faster, particularly in the menu response. The only area I found the Windows version vastly superior was in printing with TrueType fonts.

You don't mention in your article what memory configuration you're using. I think that information is valuable for potential users. My performance difference may be from running with 16MB of RAM.

Keep up the good work with the magazine. I always enjoy the topics discussed.

Michael Hughes
Pittsfield, Massachusetts

I enjoyed reading your review of WordPerfect for OS/2 v 5.2 [September]. Even though I don't "live and die by a word processor," I do a fair amount of word processing—about two hours a day with my home computer, a 486/33 with HPFS drives. Therefore, I consider myself a moderate user, which I believe most of your readers are.

I would like other readers to be aware that for moderate users, WordPerfect for OS/2 is an excellent product. It starts faster than WP for Windows in a WIN-OS/2 session, and the multi-threaded printing is a real treat, which more than compensates for the slower file loading times you reported (right on the money). My only wish is that the native WordPerfect for OS/2 v. 6.0 got here faster. Viva WordPerfect for OS/2!

Juan Ramon Falcon
New York Users Group

Nightmare on OS/2 Street

I've been reading *OS/2 Professional* for about six months—it's the only computer publication I read cover-to-cover.

Thank you for being a reliable source of OS/2 information. I know you're only trying to present all points of view but it's very disheartening to see those letters that talk about OS/2 nightmares. I've never had any such problems (I started with v 1.3). I know they happen, but I hope they don't scare more people away.

I started with OS/2 because I use a voice-response application that requires it. Now I can't imagine not using it. At work I'm forced to use Windows 3.1 and the memory problems alone drive me absolutely crazy. It's simply unbelievable what that same 8MB of memory will do when controlled by OS/2. I use DOS database software, a Windows word processor, and the OS/2 voice-response software; they all work together and they can all run at the same time—what more can you ask?

I run the Twin Cities Arts Hotline on three phone lines, fax software on one modem, a small BBS on another, and a scheduler to do daily maintenance. And I can do other things on top of that! The DOS-based voice-response systems do let you run multiple phone lines but, of course, they take over the CPU so you can't do anything else. And the Unix-based products are very efficient but impossible to administer without a MS degree in Computer Science.

I'm about to start my own business to do 1-12 line voice applications for small to mid-sized companies. I look forward to showing OS/2 to my prospective clients and debunking some of the myths. I just hope they haven't already heard from the folks who've had nightmares or I may have quite an uphill battle.

Bob Malos
University of Minnesota

Hands on, please

I found October to be a very good issue. I'm looking forward to more technical information and examples along the line of SOM, DSOM, and PSOM, not to mention the Workplace OS. I hope

to see some "how to" articles and "here's what you can do." The potential is great.

Jeff Stratford
(A499311@btvlabvm.vnet.ibm.com)

Using Sytos Plus

Users of Sytos Plus often complain about its complicated restore procedures. If you need to reformat your OS/2 partition you will be caught in a Catch-22, since the tape software runs only on OS/2. This means that you must first reload OS/2 from the distribution disks to the partition, then load the tape software, then run restore with redirection of systems files, and then finally move the .INI files to their proper places.

I would like to share with the readers a neat way to use Sytos, which is now capable of backing up my DOS partitions as well as the OS/2 system without interference. Full backups and restores can be made without the need to reload OS/2 from the distribution disks when you have to do a full OS/2 restore. This is how:

I have partitioned my primary hard drive into one primary partition (C) and two logical partitions (D and E). The C partition runs DOS and the D partition OS/2. The E partition is 11MB large and is located at the end of the disk. Using the BOOT2X utility I obtained from the OS/2 Shareware BBS (703-385-4325), I've loaded a bootable OS/2 skeleton on the E drive. Sytos is also loaded on the E drive, since the tape software requires OS/2 to run. Now, with Boot Manager installed, I simply boot the E drive and run Sytos Plus from there whenever I want to back up or restore either or both the C or D drives. The entire operating system can be backed up without interference from the system files, which would be busy (and not be backed up) had I run Sytos from the main OS/2 partition. The restore procedure runs equally smoothly and no redirection is necessary. ♦

Harry D. Fisher
Reseda, California

LET THE CHIPS FALL

You *can* see the Forest for the Trees

IBM-bashing is the current rage in the microcomputer industry, with the PSP division, responsible for OS/2, getting more than its fair share of the attention. While the company is re-inventing itself to become more adaptable, competitors such as Microsoft use their PR machine and advertising clout to sway public and editorial opinions. Other software vendors decry IBM's lack of focus on or commitment to their products, and customers become lost in a maze trying to get answers from our blue "monolith."

There are differences, however, between IBM's re-invention and external criticisms, particularly Microsoft's. While most internal, and a majority of the external, forces expose IBM's problems so they can be eliminated, mitigated, or otherwise repaired, other parties delight in constant negative flow due to their special (commercial) interests.

After all, that is the premise behind free enterprise: Either provide a superior product or make customers believe it is. Then sell it for what the market will bear while forcing your competition into oblivion. Darwin could have been describing market economics as well as evolution when he decided that only the fittest survive.

The customer must decide what is the truth and what is marketing fiction. The loudest voice may be heard the best, but it does not necessarily sing the sweetest song. Customers look to IBM and its competitors for information about their respective products—information that will ultimately drive purchasing decisions. Therefore, it is in each party's interest to put its best foot forward.

While there are many areas open to improvement, I can say that PSP provides a great deal of useful product information on OS/2, PC-DOS, LAN, and its other products. Take a look at the size of and activity on the PSP CompuServe forums; the widely attended and critically acclaimed worldwide developer conferences, workshops, and technical interchanges; the road show seminars that tour the U.S. evangelizing PSP products; the breath of fresh air that has invigorated and revitalized the advertising campaigns; the success of the Independent Vendor League in getting publishers to bring almost 70 PSP product books to the market; the growing number of OEM hardware vendors bundling OS/2 with their systems; the emergence of first-rate applications from Lotus, Computer Associates, and on and on. If people are having a hard time getting their hands around this thing called PSP, it isn't because we're not telling the story—it's because there are so many "trees" to talk about.

This outpouring of information is in response to customer needs and demands and, while we are still improving, the arrogant, aloof IBM of the recent past is receding quickly.

So, when I ask you to let us know what we are doing wrong, or what we are not doing that needs to be done, bash away! There are those inside IBM who will be listening, working to solve the problems. ♦

Ted Salamone
PSP Merchandising Manager



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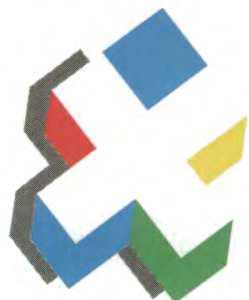
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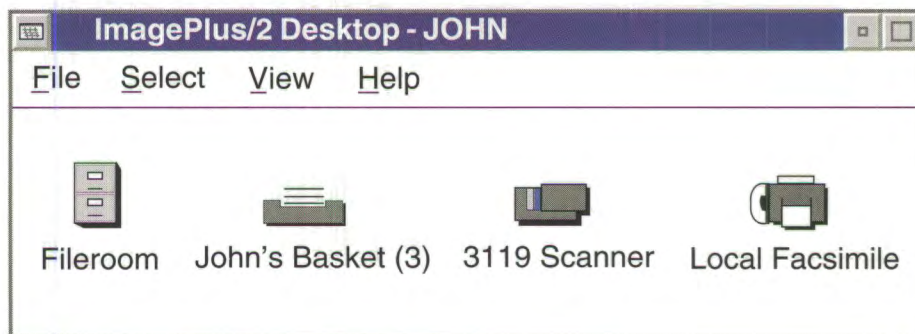
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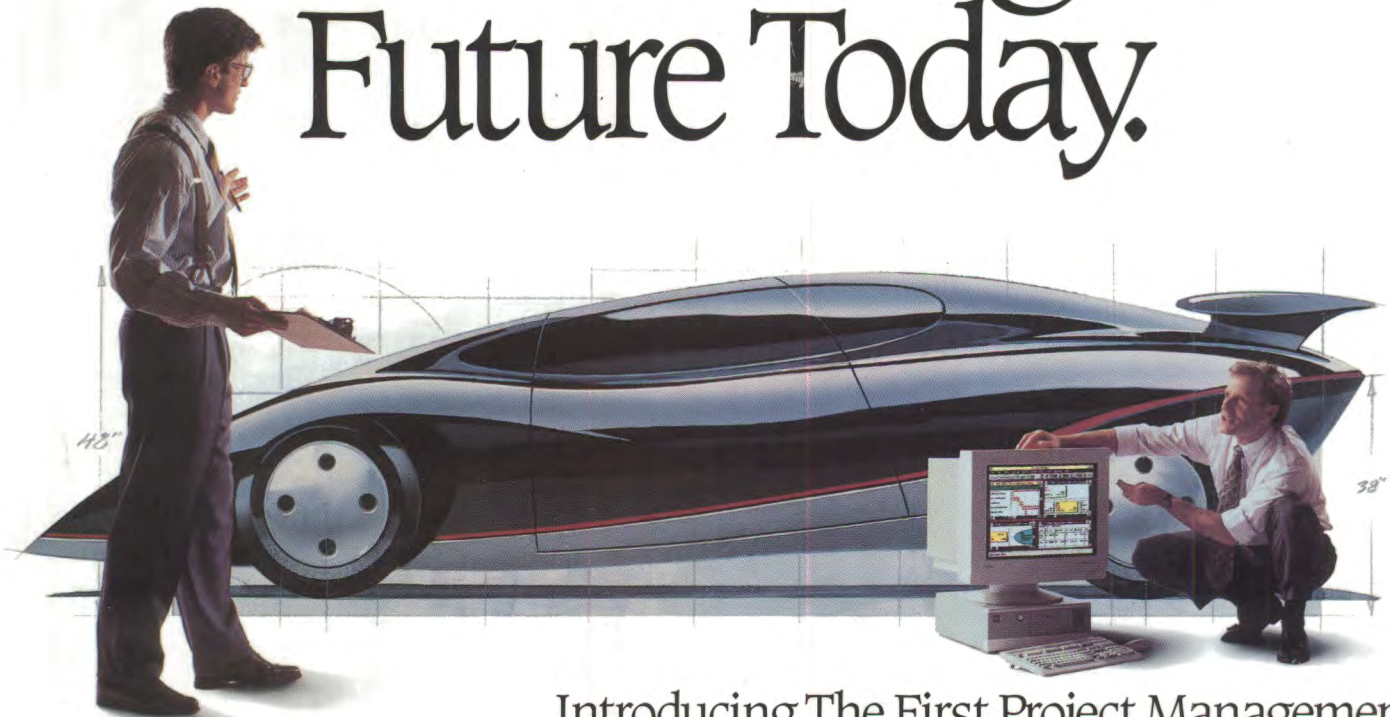
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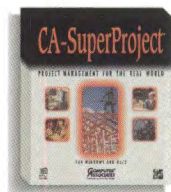
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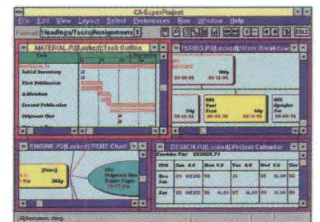
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